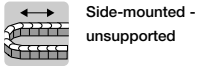


Price index



Side-mounted -
unsupported



ESD classification:
Electrically conductive ESD/ATEX
version upon request



High torsional
rigidity



Opening E-Chains: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (E-Tubes) - Insert screwdriver into the slot, release by lever action



When to use the Series 2828/2928/R7728:

- When high torsional or shearing forces are expected
- For side-mounted applications involving large unsupported lengths
- For long-term operation in very moist environments
- Also available as Rol E-Chain®



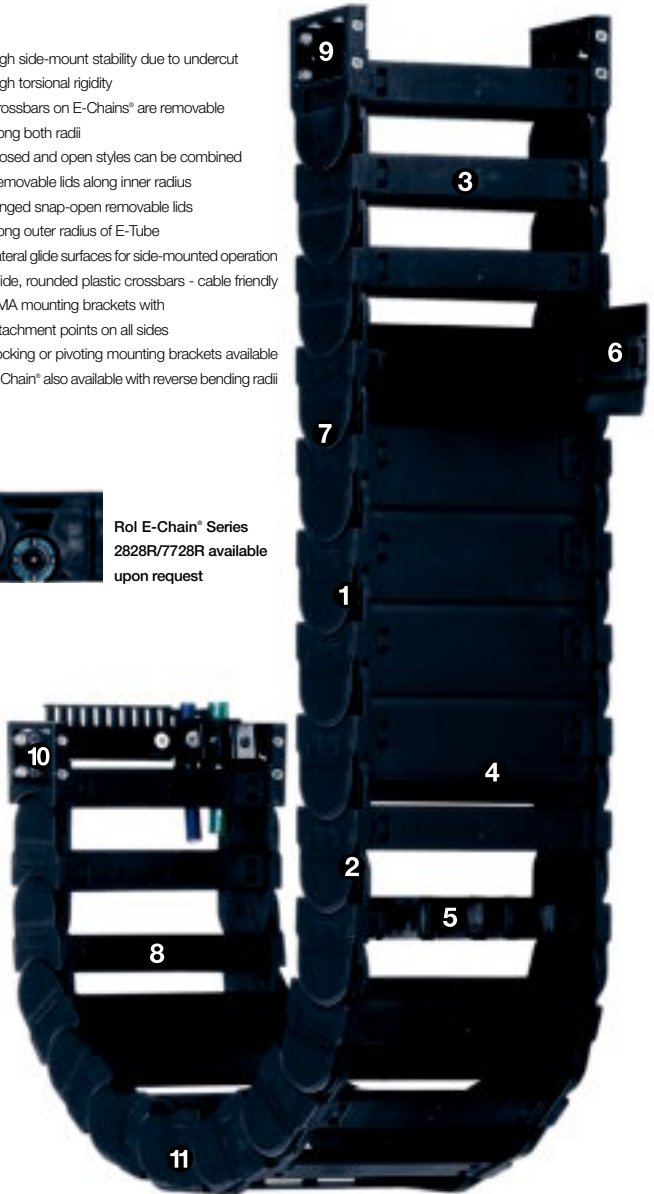
When not to use it:

- If a quieter version is required
- ▶ Series E4.32, page 7.34

- 1 High side-mount stability due to undercut
- 2 High torsional rigidity
- 3 Crossbars on E-Chains® are removable along both radii
- 4 Closed and open styles can be combined
- 5 Removable lids along inner radius
- 6 Hinged snap-open removable lids along outer radius of E-Tube
- 7 Lateral glide surfaces for side-mounted operation
- 8 Wide, rounded plastic crossbars - cable friendly
- 9 KMA mounting brackets with attachment points on all sides
- 10 Locking or pivoting mounting brackets available
- 11 E-Chain® also available with reverse bending radii



Rol E-Chain® Series 2828R/7728R available upon request



Order example complete E-Chain®

Please indicate chain-lengths or number of links Example: 3 m or 54 links

3 m 2828.30.300.0



E-Chain®

with 2 separators 282 assembled every 2nd link



Interior separation

1 set 28280.30.12C



Mounting bracket

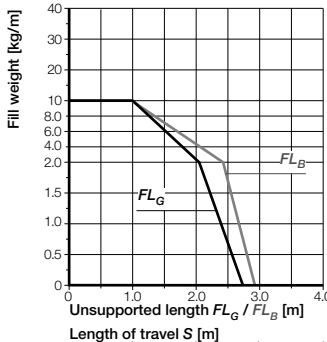
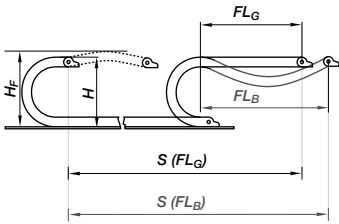


Unsupported length

FL_G = with straight upper run

FL_B = with permitted sag

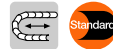
Further information ► **Design, page 1.12**



- S = Length of travel
 - R = Bending radius
 - H = Nominal clearance height
 - H_F = Required clearance height
 - H_{RI} = Trough inner height
 - D = Overlength E-Chain® radius in final position
 - $K = \pi \cdot R + \text{"safety"}$
 - D_2 = Over length - long travels, gliding
 - K_2 = *Further add-on
 - H_2 = *Mounting height
- *if the mounting bracket location is set lower

Other installation methods

- Vertical, hanging ≤ 70 m
- Vertical, standing ≤ 5 m
- Side mounted, unspupp. ≤ 2 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request



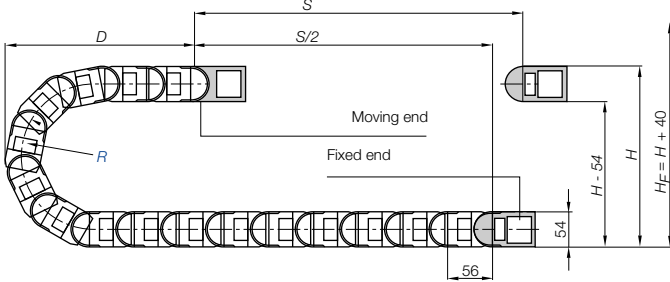
Short travels - unsupported

Unsupported E-Chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted.

The required clearance height:

$$H_F = H + 40 \text{ mm}$$

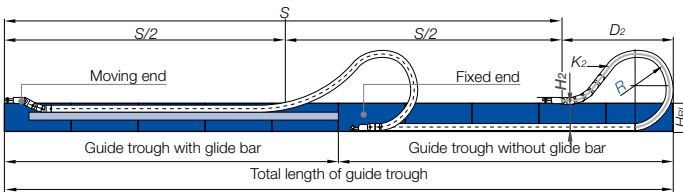
(with 2,0 kg/m fill weight)



Pitch = 56 mm/link Links/m = 18 (1008 mm) Chain length = $S/2 + K$

R	063	075	100	125	150	175	200	220	250	300
H_{20}	180	205	255	305	355	405	455	495	555	655
D	130	150	175	200	225	250	275	295	325	375
K	340	380	465	550	620	700	780	850	940	1110
H_2	180	205	166	166	166	166	166	166	166	166
D_{20}	130	150	370	445	625	655	770	870	930	1240
K_2	340	380	616	784	1008	1064	1288	1456	1568	1960

Long travel lengths from 10 m to max. 200 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 200 m)

In this case the E-Chain® upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



Details of material properties

► page 1.38

32

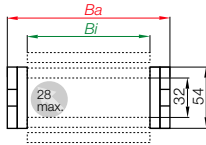
System E4/4
Inner height: 32 mm

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Fax +49- (0) 22 03-96 49-222



► page 7.223

For support of the lower run - **Support Tray tool kit** available ► page 9.70

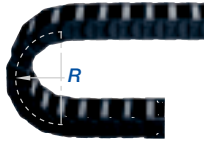


Part No. structure

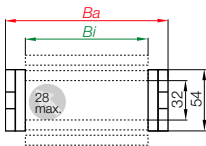
2828. 30. 300. 0



Series 2828 - E-Chain® with crossbars every link



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides

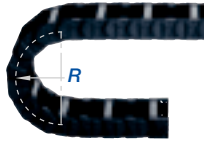


Part No. structure

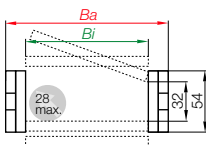
2928. 30. 300. 0



Series 2928 - E-Chain® with crossbars every 2nd link



- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price

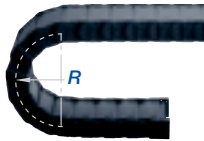


Part No. structure

7728. 30. 300. 0



Series R7728 - Fully enclosed E-Tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.



Rol instead of gliding: Rol E-Chain®

Special solution for long travels. 75% less drive power (gliding application) with igus® Rol E-Chain®.
Series 2828R - Order example 2828R.30.220.0
Further information: www.igus.de/en/role
or phone: +49-0 22 03-96 49-800



Part No.	<i>Bi</i> [mm]	<i>Ba</i> [mm]	2828 [kg/m]	2928 [kg/m]	R7728 [kg/m]
2828/2928/7728.05... <input type="checkbox"/> .0*	50	74	≈ 1,73	≈ 1,64	≈ 2,63
2828/2928.06... <input type="checkbox"/> .0	68	92	≈ 1,79	≈ 1,67	-
2828/2928/7728.07... <input type="checkbox"/> .0	75	99	≈ 1,84	≈ 1,69	≈ 2,75
2828/2928.087... <input type="checkbox"/> .0	87	111	≈ 1,93	≈ 1,73	-
2828/2928/7728.10... <input type="checkbox"/> .0	100	124	≈ 2,02	≈ 1,78	≈ 2,83
2828/2928/7728.11... <input type="checkbox"/> .0	108	132	≈ 2,08	≈ 1,81	≈ 2,94
2828/2928.112... <input type="checkbox"/> .0	112	137	≈ 2,15	≈ 1,84	-
2828/2928/7728.12... <input type="checkbox"/> .0	125	149	≈ 2,20	≈ 1,87	≈ 3,03
2828/2928.137... <input type="checkbox"/> .0	137	162	≈ 2,29	≈ 1,91	-
2828/2928/7728.15... <input type="checkbox"/> .0	150	174	≈ 2,38	≈ 1,96	≈ 3,19
2828/2928.162... <input type="checkbox"/> .0	162	187	≈ 2,44	≈ 1,99	-
2828/2928/7728.17... <input type="checkbox"/> .0	168	192	≈ 2,51	≈ 2,02	≈ 3,39
2828/2928.18... <input type="checkbox"/> .0	175	199	≈ 2,56	≈ 2,05	-
2828/2928.187... <input type="checkbox"/> .0	187	212	≈ 2,65	≈ 2,09	-
2828/2928/7728.20... <input type="checkbox"/> .0	200	224	≈ 2,74	≈ 2,14	≈ 3,59
2828/2928.212... <input type="checkbox"/> .0	212	237	≈ 2,87	≈ 2,20	-
2828/2928.23... <input type="checkbox"/> .0	225	249	≈ 2,92	≈ 2,22	-
2828/2928.237... <input type="checkbox"/> .0	237	262	≈ 3,05	≈ 2,29	-
2828/2928/7728.25... <input type="checkbox"/> .0	250	274	≈ 3,10	≈ 2,32	≈ 4,04
2828/2928.262... <input type="checkbox"/> .0	262	286	≈ 3,19	≈ 2,36	-
2828/2928.28... <input type="checkbox"/> .0	275	299	≈ 3,28	≈ 2,41	-
2828/2928.29... <input type="checkbox"/> .0	287	312	≈ 3,37	≈ 2,45	-
2828/2928/7728.30... <input type="checkbox"/> .0	300	324	≈ 3,46	≈ 2,50	≈ 4,43
2828/2928.312... <input type="checkbox"/> .0	312	337	≈ 3,59	≈ 2,56	-
2828/2928.325... <input type="checkbox"/> .0	325	349	≈ 3,68	≈ 2,60	-
2828/2928.337... <input type="checkbox"/> .0	337	362	≈ 3,77	≈ 2,65	-
2828/2928.350... <input type="checkbox"/> .0	350	374	≈ 3,86	≈ 2,69	-
2828/2928.362... <input type="checkbox"/> .0	362	387	≈ 3,95	≈ 2,74	-
2828/2928.375... <input type="checkbox"/> .0	375	399	≈ 4,04	≈ 2,79	-
2828/2928.387... <input type="checkbox"/> .0	387	412	≈ 4,11	≈ 2,82	-
2828/2928.400... <input type="checkbox"/> .0	400	424	≈ 4,18	≈ 2,86	-

Available bending radii **not available for R7728 · *Removable lid only, no hinged option

R [mm] 063** 075** 100** 125 150 175 200 220 250 300

Supplement Part No. with required radius. Example: 2828.30.300.0

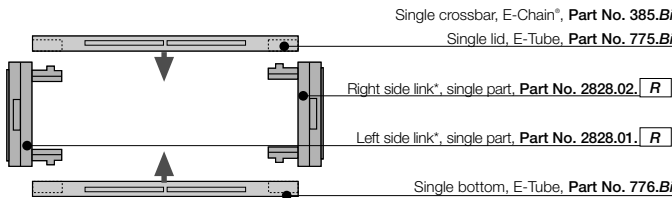
0 = standard color, other colors ▶ page 1.39 · Pitch = 56 mm/link · Links/m = 18

Hot Chips up to 850°C

E-Tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order example: Full E-Tube made of HT: **7728.30.150.0.HT**
Lids made of HT: **7728.30.HTE.150.0**
*for long travels. Upon request
Further Information: www.igus.de/en/HT
Delivery time up to 4 weeks!



Extender crossbar for large diameter hoses ▶ page 7.230



Part No. E-Chain® - links, single parts

*View from the fixed point of the E-Chain®/E-Tube

System E4/4
Inner height: 32 mm

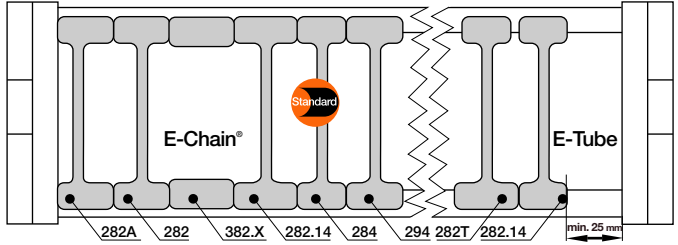
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▶ page 7.223



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 25 mm (E-Tube)



Vertical separator
281



Vertical separator
281T



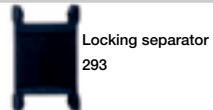
Vertical separator
281.14



Vertical separator
283



Spacer
381.XX



Locking separator
293



Asymmetric
separator 281A

Vertical separator for E-Chains*	2,5
unassembled	281
assembled	282

Vertical separator for E-Tubes	2,5
unassembled	281T
assembled	282T

Vertical separator for E-Chains*/E-Tubes	2,5
unassembled	281.14
assembled	282.14

Vertical separator for E-Chains*	2,5
unassembled	283
assembled	284

Spacer* for E-Chains*	2,5
unassembled	381.XX
assembled	382.XX

Locking separator for E-Chains*	2,5
unassembled	293
assembled	294

Asymmetric separator for E-Chains*	2,5
unassembled	281A
assembled	282A

*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 281 for E-Chains®** offers safe stability due to its broad foot design, also when used with thick cables or hoses. If the distance needed between separators is greater than this separator's dimension, we offer the **Vertical separator 281.14**.

● **Standard separator 281 for E-Chains®** offers safe stability due to its broad foot design, also when used with thick cables or hoses. If the distance needed between separators is greater than this separator's dimension, we offer the **Vertical separator 281.14**.

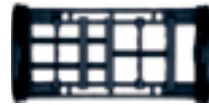
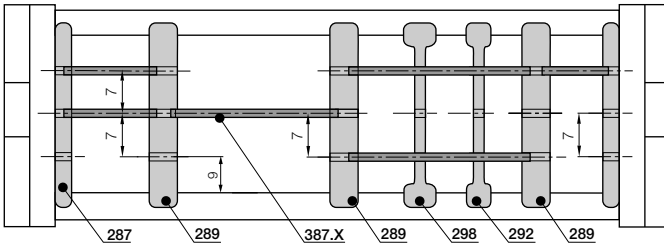
● **Vertical separator 283 with a narrow foot for E-Chains®** with applications where a large number of small cables need to be individually separated.

● Separators (e.g. "side mounted") for E-Chains® can be fixed in their position with **spacers 381.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15, 20).

Additionally

● **Locking separator 293 for E-Chains®** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment (not for E-Tubes).

● **Asymmetric separator 281A for E-Chains®** (not for E-Tubes) with an 12-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.



For use with many cables of differing diameters. E-Chains[®] and E-Tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

Option 2: Shelves

● Side plates 286, middle plates 288 and shelves 386.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 3 different heights (in 7 mm increments).

● For special applications: Vertical separator with injection moulded shelf 281.S.57 (57,5 mm) or 281.S.45 (45 mm)

● Slotted separators 291 (not for E-Tubes), are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

● The unilateral open slotted separator 297 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate for E-Chains [®] /E-Tubes	
unassembled	286
assembled	287

Middle plate for E-Chains [®] /E-Tubes	
unassembled	288
assembled	289

Vertical separator for E-Chains [®] /E-Tubes	
unassembled	281.S.57
assembled	282.S.57

Vertical separator for E-Chains [®] /E-Tubes	
unassembled	281.S.45
assembled	282.S.45

Slotted separator for E-Chains [®]	
unassembled	291
assembled	292

Open slotted separator for E-Chains [®] /E-Tubes	
unassembled	297
assembled	298

Width X [mm]	Part No. unassembled	Part No. assembled
018	386.18	387.18
023	386.23	387.23
025	386.25	387.25
028	386.28	387.28
033	386.33	387.33
043	386.43	387.43
050	386.50	387.50
054	386.54	387.54
062	386.62	387.62
075	386.75	387.75

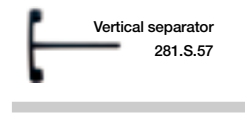
Width X [mm]	Part No. unassembled	Part No. assembled
087	386.87	387.87
100	386.100	387.100
108	386.108	387.108
125	386.125	387.125
150	386.150	387.150
175	386.175	387.175
200	386.200	387.200
208	386.208	387.208
225	386.225	387.225



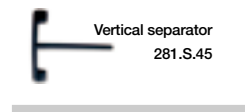
Side plate 286



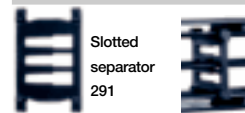
Middle plate 288



Vertical separator 281.S.57



Vertical separator 281.S.45



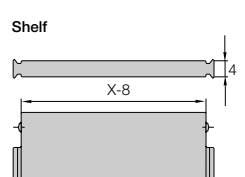
Slotted separator 291



Open slotted separator 297



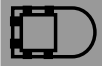
Shelf 386.X



Shelf

System E4/4
Inner height: 32 mm

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Fax +49- (0) 22 03-96 49-222



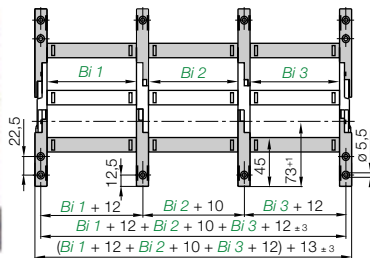


Extension links - for extremely wide E-Chains® up to 3,0 m

- For applications in which particularly high fill weights necessitate extremely wide E-Chains® (up to 3000 mm)
- The extension link design allows virtually limitless side-by-side attachment of chains
- The unsupported length of a chain can be increased when additional loads are required
- Extension links can be used with E-Chains®, E-Tubes or as a combination of both
- They are suitable for unsupported and gliding applications in a guide trough
- E-Chains® with extension links are attached with KMA or steel mounting brackets



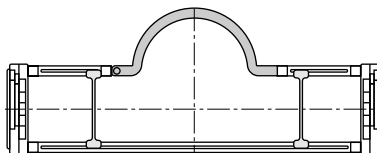
Part No. structure
2828.10 /20 /10. [200].0
2828.Bi1/Bi2/Bi3. [R].0



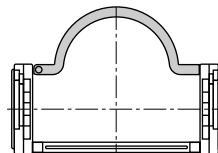
Extender crossbars - careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 105 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars

Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout



385.15RHD115 round extender crossbar combined with snap-open crossbars



385.18RD115 round strap assembled directly on the side section

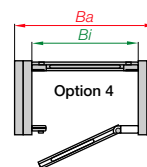
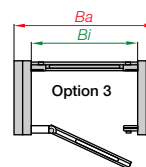
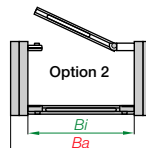
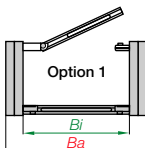
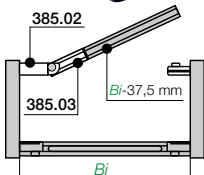
Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossb.
385.15.RHD115	105	○	-	+
385.18.RD115	105	○	+	-

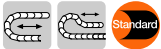
○ = round + = yes / - = no



Hinged crossbars

- Typically E-Chain® crossbars are completely removable. In cases where the snap-open crossbars have to remain at the open link of the E-Chain®, a hinged design has been developed
- Length: 37,5 mm **Part No. 385.02** / snap-open crossbar (shortened): Bi-37,5 mm **Part No. 385.03**
- Please consult igus® for design assistance



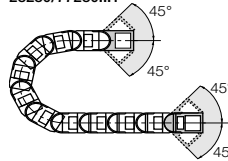


The Standard - Option KMA* - pivoting

- Recommended for unsupported and gliding applications
- Confined installation conditions
- Option - integrated C-profile strain relief device with Chainfix clip or strain relief tiwrap plates
- Corrosion resistant
- Universal mountable with attachment capability on all sides

*KMA = Polymer Metal Mounting Bracket

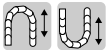
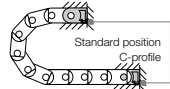
Moving end
28280/77280...1



Fixed end
28280/77280...2



The attachment variants arising automatically by the choice of the KMA mounting bracket



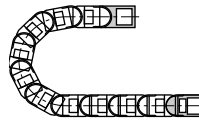
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universal mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

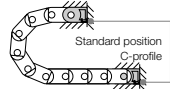
Moving end
29280/78280...1



Fixed end
29280/78280...2



The attachment variants arising automatically by the choice of the KMA mounting bracket

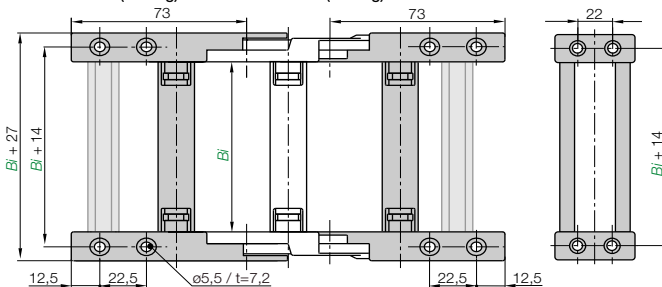


Fixed end

28280/77280...2 (pivoting)
29280/78280...2 (locking)

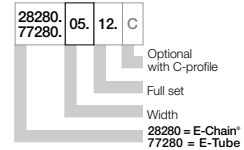
Moving end

(pivoting) 28280/77280...1
(locking) 29280/78280...1

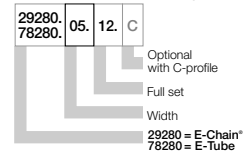


Dimensions and order configurations

Part No. structure (pivoting)



Part No. structure (locking)



Width index	Part No. full set		C-profile option [mm]		Width index	Part No. full set		C-profile option [mm]	
	pivoting	locking	C-profile	option [mm]		pivoting	locking	C-profile	option [mm]
.05.	▶ 28280/77280	29280/78280	.05.12.C	50	.23.	▶ 28280	29280	.23.12.C	225
.06.	▶ 28280	29280	.06.12.C	68	.237.	▶ 28280	29280	.237.12.C	237
.07.	▶ 28280/77280	29280/78280	.07.12.C	75	.25.	▶ 28280/77280	29280/78280	.25.12.C	250
.087.	▶ 28280	29280	.087.12.C	87	.262.	▶ 28280	29280	.262.12.C	262
.10.	▶ 28280/77280	29280/78280	.10.12.C	100	.28.	▶ 28280	29280	.28.12.C	275
.11.	▶ 28280/77280	29280/78280	.11.12.C	108	.29.	▶ 28280	29280	.29.12.C	287
.112.	▶ 28280	29280	.112.12.C	112	.30.	▶ 28280/77280	29280/78280	.30.12.C	300
.12.	▶ 28280/77280	29280/78280	.12.12.C	125	.312.	▶ 28280	29280	.312.12.C	312
.137.	▶ 28280	29280	.137.12.C	137	.325.	▶ 28280	29280	.325.12.C	325
.15.	▶ 28280/77280	29280/78280	.15.12.C	150	.337.	▶ 28280	29280	.337.12.C	337
.162.	▶ 28280	29280	.162.12.C	162	.350.	▶ 28280	29280	.350.12.C	350
.17.	▶ 28280/77280	29280/78280	.17.12.C	168	.362.	▶ 28280	29280	.362.12.C	362
.18.	▶ 28280	29280	.18.12.C	175	.375.	▶ 28280	29280	.375.12.C	375
.187.	▶ 28280	29280	.187.12.C	187	.387.	▶ 28280	29280	.387.12.C	387
.20.	▶ 28280/77280	29280/78280	.20.12.C	200	.400.	▶ 28280	29280	.400.12.C	400
.212.	▶ 28280	29280	.212.12.C	212					

Full set, for both ends:

28280.[05].[12]

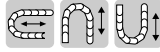
Single-part order:

28280.[05].[1]

Mounting bracket moving end

28280.[05].[2]

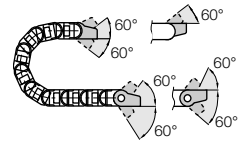
Mounting bracket fixed end



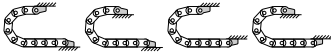
Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
28280.1



Fixed end
28280.2



Possible installation conditions -

Further installation angles ► installation sketch

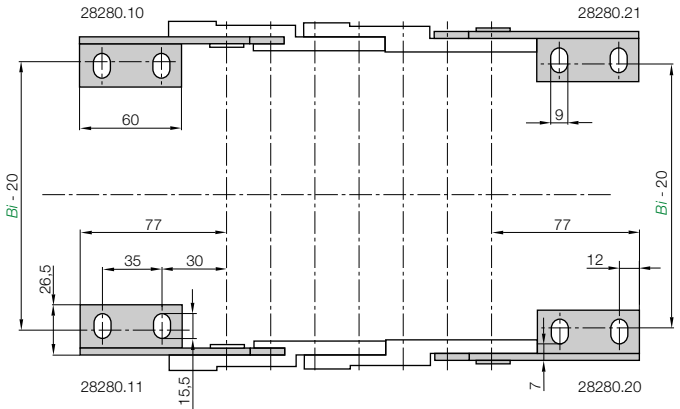
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51147 Cologne

Internet: www.igus.eu
E-mail: info@igus.de

Moving end
28280.1

Fixed end
28280.2



For	Part No.	Bi	For	Part No.	Bi
E-Chain®	full set	[mm]	E-Chain®	full set	[mm]
2828-2928-7728.05 ►	28280.12	50	2828-2928.23 ►	28280.12	225
2828-2928.06 ►	28280.12	68	2828-2928.237 ►	28280.12	237
2828-2928-7728.07 ►	28280.12	75	2828-2928-7728.25 ►	28280.12	250
2828-2928.087 ►	28280.12	87	2828-2928.262 ►	28280.12	262
2828-2928-7728.10 ►	28280.12	100	2828-2928.28 ►	28280.12	275
2828-2928-7728.11 ►	28280.12	108	2828-2928.29 ►	28280.12	287
2828-2928.112 ►	28280.12	112	2828-2928-7728.30 ►	28280.12	300
2828-2928-7728.12 ►	28280.12	125	2828-2928.312 ►	28280.12	312
2828-2928.137 ►	28280.12	137	2828-2928.325 ►	28280.12	325
2828-2928-7728.15 ►	28280.12	150	2828-2928.337 ►	28280.12	337
2828-2928.162 ►	28280.12	162	2828-2928.350 ►	28280.12	350
2828-2928-7728.17 ►	28280.12	168	2828-2928.362 ►	28280.12	362
2828-2928.18 ►	28280.12	175	2828-2928.375 ►	28280.12	375
2828-2928.187 ►	28280.12	187	2828-2928.387 ►	28280.12	387
2828-2928-7728.20 ►	28280.12	200	2828-2928.400 ►	28280.12	400
2828-2928.212 ►	28280.12	212			

28280.12 Full set, 4 parts
2 with pin / 2 with bore

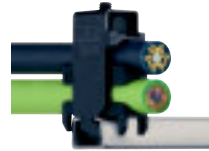
Single-part order:

- 28280.1 Mounting bracket moving end, 1 part left / right
- 28280.2 Mounting bracket fixed end, 1 part left / right

Other strain relief elements
► chapter 10

Chainfix clamps for the C-profile

Part No. single clamps		Part No. double clamps		Part No. triple clamps		Cable ø [mm]
steel	stainless steel	steel	stainless steel	steel	stainless steel	
CFX12.1	CFX12.1.E	CFX12.2	CFX12.2.E	CFX12.3	-	06 - 12
CFX14.1	CFX14.1.E	CFX14.2	CFX14.2.E	CFX14.3	-	12 - 14
CFX16.1	CFX16.1.E	CFX16.2	CFX16.2.E	CFX16.3	-	14 - 16
CFX18.1	CFX18.1.E	CFX18.2	CFX18.2.E	CFX18.3	-	16 - 18
CFX20.1	CFX20.1.E	CFX20.2	CFX20.2.E	CFX20.3	-	18 - 20
CFX22.1	CFX22.1.E	CFX22.2	CFX22.2.E	CFX22.3	-	20 - 22
CFX26.1	CFX26.1.E	CFX26.2	CFX26.2.E	-	-	22 - 26
CFX30.1	CFX30.1.E	CFX30.2	CFX30.2.E	-	-	26 - 30
CFX34.1	CFX34.1.E	CFX34.2	CFX34.2.E	-	-	30 - 34
CFX38.1	CFX38.1.E	-	-	-	-	34 - 38
CFX42.1	CFX42.1.E	-	-	-	-	38 - 42



igus® Chainfix steel clamps and Chainfix stainless-steel clamps - max. pull forces, adjustable with hexagon socket. Available as single, double or triple clamps. **Details ▶ chapter 10**

System E4/4
Inner height: 32 mm

Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	CFC-08-M	CFC-08-C
08 - 12	CFC-12-M	CFC-12-C
12 - 16	CFC-16-M	CFC-16-C
16 - 20	CFC-20-M	CFC-20-C
20 - 24	CFC-24-M	CFC-24-C

Chainfix Clip - Modular snap-on strain relief device for C-profile

Available for all igus® E-ChainSystems® with C-profiles and also suitable for assembly in the KMA mounting brackets and clip-on strain relief for crossbars. High pull forces, plug-in modular snap-on strain relief device. **Details ▶ chapter 10**



Part No.	ø max. conduit [mm]	Width [mm]
CFN.20	20	10,8
CFN.30.52	30	16,8
CFN.20.N35	20	20,0

Chainfix Nugget for the C-Profile

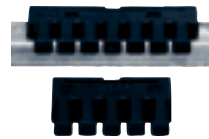
Strain relief for the fixation of cables up to a diameter of Ø 30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-hressed cable strap, very small space requirement. **Details ▶ chapter 10**



Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

Chainfix tiwrap plates with clip-on connection for the C-profile

Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all E-Chains® with KMA and integrated C-profile. **Details ▶ chapter 10**

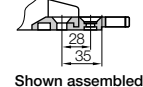
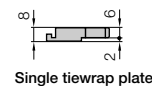
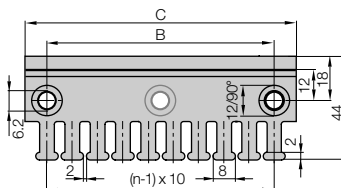


Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(- = no / + = yes)

Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**

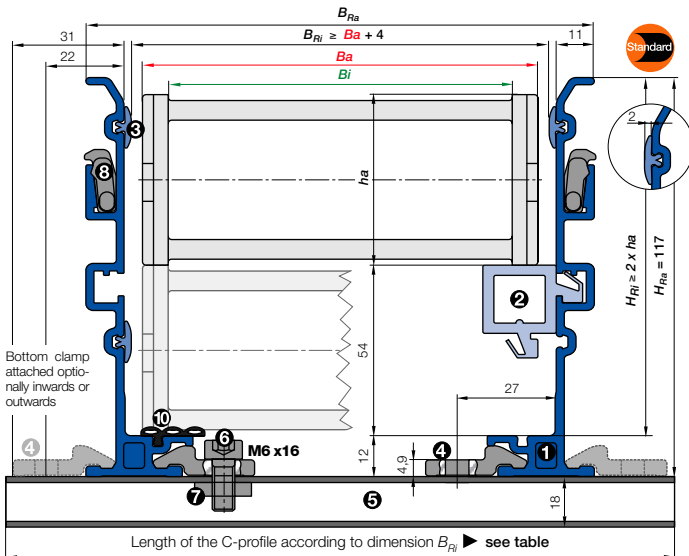


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▶ page 7.223

- B_a = Outer width E-Chains* / E-Tube
- B_i = Inner width E-Chains* / E-Tube
- h_a = Outer height E-Chains* / E-Tube
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- B_{Ri} = Inner trough width ► depends on dim. B_a
- B_{Ra} = Outer trough width
- n_{Mon} = Number of installation sets (left/right)
- n_{Ri} = Number of troughs sets (left/right)
- $H_{Ri} \geq 2 \cdot h_a$
- $B_{Ri} \geq B_a + 4$
- = Guide trough set ● = Glide bar
- = Installation set "Basic" ● = C-profile



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Installation set "Basic" with C-profile

Bottom Clamp attached optionally inwards or outwards

2828.05.200.0 ► Order example

	Part No.	Part No.	
		B_{Ri} attached inwards [mm]	attached outwards
.05	78	960.30.125	960.30.175
.06	96	960.30.150	960.30.200
.07	103	960.30.150	960.30.200
.087	115	960.30.175	960.30.225
.10	128	960.30.175	960.30.225
.11	136	960.30.200	960.30.225
.112	141	960.30.200	960.30.250
.12	153	960.30.200	960.30.250
.137	166	960.30.225	960.30.275
.15	178	960.30.225	960.30.275
.162	191	960.30.250	960.30.300
.17	196	960.30.250	960.30.300
.18	203	960.30.250	960.30.300
.187	216	960.30.275	960.30.325
.20	228	960.30.275	960.30.325
.212	241	960.30.300	960.30.350
.23	253	960.30.300	960.30.350
.237	266	960.30.325	960.30.375
.25	278	960.30.325	960.30.375
.262	291	960.30.350	960.30.400
.28	303	960.30.350	960.30.400
.29	316	960.30.375	960.30.425
.30	328	960.30.375	960.30.425
.312	341	960.30.400	960.30.450
.325	353	960.30.400	960.30.450
.337	366	960.30.425	960.30.475
.350	378	960.30.425	960.30.475
.362	391	960.30.450	960.30.500
.375	403	960.30.450	960.30.500
.387	416	960.30.475	960.30.525
.400	428	960.30.475	960.30.525

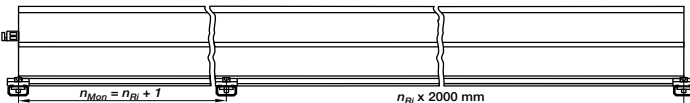
igus® GmbH
51147 Cologne

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E-mail: info@igus.de

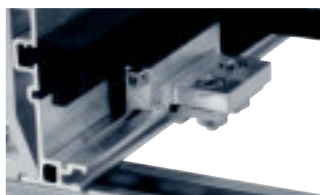
- Components, trough "Basic": ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- Components, installation set "Basic": ④ Bottom clamp, aluminum ⑤ C-profile, steel galvanized ⑥ Screw M6 x 16 ⑦ Sliding nut M6 ⑧ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 2828.30.300.0 with $B_{Ri} = 328$

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. 972.30.SL
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. 972.31.SL
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets "Basic" Part No. 960.30.375
- Module for the fixed end
Order text: 1 set Part No. 972.80
- Option:** For an additional noise dampening with silencer profile, please add Index A - Example: **Part No. 972.30.SLA**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1



A quick fix for mounting the stationary end of an E-Chain®
With this module for the fixed end, fast and easy mounting onto the Aluminum "SuperTrough" is now possible without any drilling. Fast mounting of the E-Chain® by clamping onto the aluminum trough
● Quick relocation of the stationary end ● No drilling necessary ► page 9.16

Price index



Series 3838

Series 3938

Series R7838



Side-mounted -
unsupported



ESD classification:
Electrically conductive ESD/ATEX
version upon request



High torsional
rigidity



Opening E-Chains: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (E-Tubes) - Insert screwdriver into the slot, release by lever action



When to use the Series 3838/3938/R7838:

- When high torsional or shearing forces are expected
- For side-mounted applications involving large unsupported lengths
- For long-term operation in very moist environments
- Also available as Rol E-Chain®



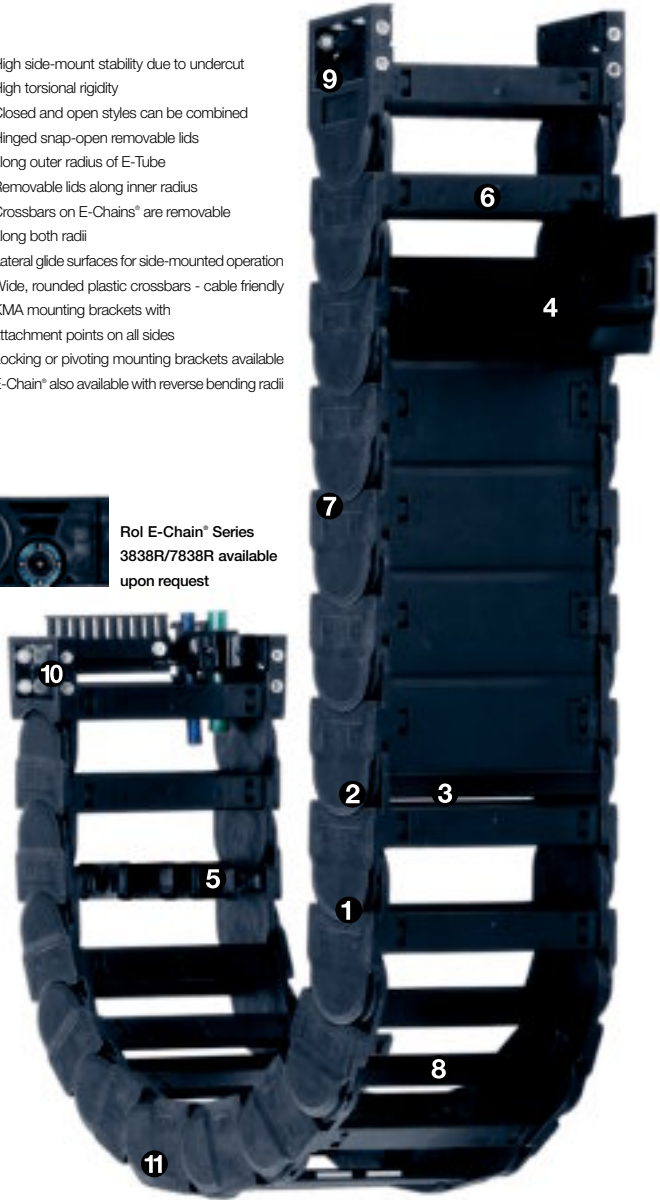
When not to use it:

- If a quieter version is required
▶ Series E4.42, page 7.48

- 1 High side-mount stability due to undercut
- 2 High torsional rigidity
- 3 Closed and open styles can be combined
- 4 Hinged snap-open removable lids along outer radius of E-Tube
- 5 Removable lids along inner radius
- 6 Crossbars on E-Chains® are removable along both radii
- 7 Lateral glide surfaces for side-mounted operation
- 8 Wide, rounded plastic crossbars - cable friendly
- 9 KMA mounting brackets with attachment points on all sides
- 10 Locking or pivoting mounting brackets available
- 11 E-Chain® also available with reverse bending radii



Rol E-Chain® Series
3838R/7838R available
upon request



Order example complete E-Chain®

Please indicate chain-lengths or number of links Example: 4 m or 60 links

4 m 3838.30.300.0



E-Chain®

with 2 separators 382 assembled every 2nd link



Interior separation

1 set 38380.30.12C



Mounting bracket

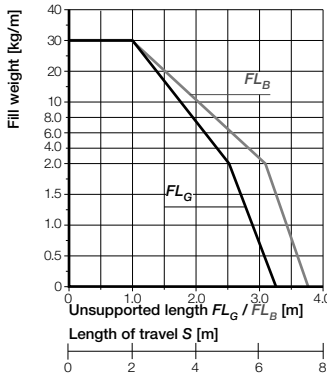
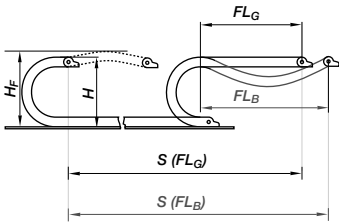


Unsupported length

FL_G = with straight upper run

FL_B = with permitted sag

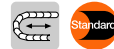
Further information ► **Design, page 1.12**



- S = Length of travel
 - R = Bending radius
 - H = Nominal clearance height
 - H_F = Required clearance height
 - H_{R1} = Trough inner height
 - D = Overlength E-Chain" radius in final position
 - $K = \pi \cdot R + \text{"safety"}$
 - D_2 = Over length - long travels, gliding
 - K_2 = "Further add-on
 - H_2 = "Mounting height
- *if the mounting bracket location is set lower

Other installation methods

- Vertical, hanging ≤ 100 m
- Vertical, standing ≤ 6 m
- Side mounted, un supp. $\leq 2,5$ m
- Rotary requires further calculation
- Unsupported length of upper run = upon request



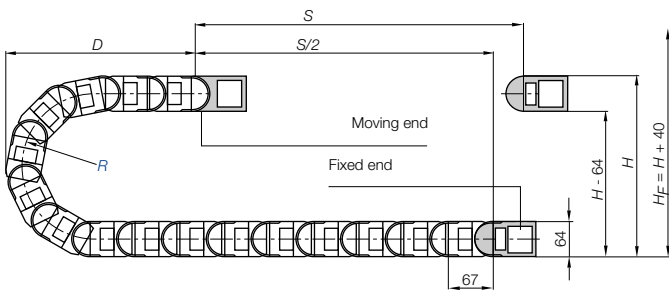
Short travels - unsupported

Unsupported E-Chains" feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus" if space is particularly restricted.

The required clearance height:

$$H_F = H + 40 \text{ mm}$$

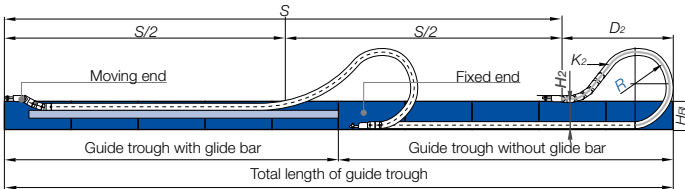
(with 2,0 kg/m fill weight)



Pitch = 67 mm/link Links/m = 15 (1005 mm) Chain length = $S/2 + K$

R	075	100	115	125	150	170	200	215	250	300	350
$H_{2,25}$	215	265	295	315	365	405	465	495	565	665	765
D	174	199	214	224	249	269	299	314	349	399	449
K	370	450	500	530	610	670	765	810	920	1080	1235
H_2	215	265	186	186	186	186	186	186	186	186	186
$D_{2,25}$	174	199	435	475	570	690	780	865	1010	1150	1500
K_2	370	450	737	804	1005	1139	1340	1407	1675	1943	2412

Long travel lengths from 10 m to max. 280 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 280 m)

In this case the E-Chain" upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



Details of material properties

► page 1.38

42

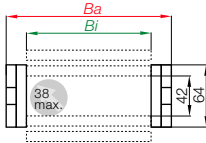
System E4/4
Inner height: 42 mm

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► page 7.223

igus® E-ChainSystems®

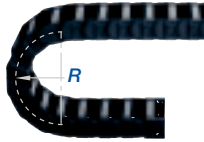


Part No. structure

3838. 400. 300. 0



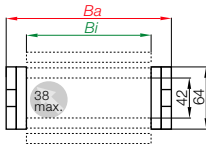
Series 3838 - E-Chain® with crossbars every link



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides



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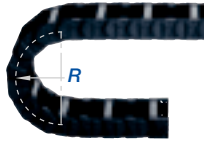


Part No. structure

3938. 400. 300. 0



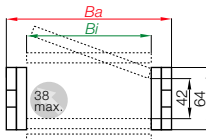
Series 3938 - E-Chain® with crossbars every 2nd link



- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price



igus® GmbH
51147 Cologne

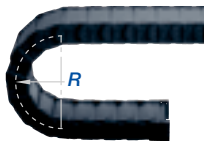


Part No. structure

7838. 25. 300. 0



Series R7838 - Fully enclosed E-Tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.



Internet: www.igus.eu
E-mail: info@igus.de

Rol instead of gliding: Rol E-Chain®

Special solution for long travels. 75% less drive power (gliding application) with igus® Rol E-Chain®.

Series 3838R - Order example - 3838R.30.250.0

Further information: www.igus.de/en/role
or phone: +49-0 22 03-96 49-800



Part No.		Bi	Ba	3838	3938	R7838
		[mm]	[mm]	[kg/m]	[kg/m]	[kg/m]
3838/3938/7838.05.	□.0*	50	77	≈ 2,06	≈ 1,98	≈ 2,25
3838/3938.06.	□.0	68	95	≈ 2,09	≈ 1,99	-
3838/3938/7838.07.	□.0	75	102	≈ 2,12	≈ 2,01	≈ 2,38
3838/3938.087.	□.0	87	115	≈ 2,18	≈ 2,04	-
3838/3938/7838.10.	□.0	100	127	≈ 2,25	≈ 2,08	≈ 2,60
3838/3938/7838.11.	□.0	108	135	≈ 2,30	≈ 2,10	≈ 2,65
3838/3938.112.	□.0	112	140	≈ 2,30	≈ 2,10	-
3838/3938/7838.12.	□.0	125	152	≈ 2,40	≈ 2,15	≈ 2,81
3838/3938.137.	□.0	137	165	≈ 2,44	≈ 2,17	-
3838/3938/7838.15.	□.0	150	177	≈ 2,53	≈ 2,21	≈ 3,07
3838/3938.162.	□.0	162	190	≈ 2,55	≈ 2,22	-
3838/3938/7838.17.	□.0	168	195	≈ 2,62	≈ 2,26	≈ 3,24
3838/3938.18.	□.0	175	202	≈ 2,62	≈ 2,26	-
3838/3938.187.	□.0	187	215	≈ 2,69	≈ 2,30	-
3838/3938/7838.20.	□.0	200	227	≈ 2,77	≈ 2,33	≈ 3,53
3838/3938.212.	□.0	212	240	≈ 2,84	≈ 2,37	-
3838/3938.23.	□.0	225	252	≈ 2,92	≈ 2,41	-
3838/3938.237.	□.0	237	265	≈ 2,96	≈ 2,43	-
3838/3938/7838.25.	□.0	250	277	≈ 3,05	≈ 2,47	≈ 4,33
3838/3938.262.	□.0	262	290	≈ 3,06	≈ 2,48	-
3838/3938.28.	□.0	275	302	≈ 3,17	≈ 2,53	-
3838/3938.29.	□.0	287	315	≈ 3,19	≈ 2,54	-
3838/3938/7838.30.	□.0	300	327	≈ 3,32	≈ 2,61	≈ 4,89
3838/3938.312.	□.0	312	340	≈ 3,34	≈ 2,62	-
3838/3938.325.	□.0	325	352	≈ 3,41	≈ 2,66	-
3838/3938.337.	□.0	337	365	≈ 3,46	≈ 2,68	-
3838/3938.350.	□.0	350	377	≈ 3,68	≈ 2,79	-
3838/3938.362.	□.0	362	390	≈ 3,74	≈ 2,82	-
3838/3938.375.	□.0	375	402	≈ 3,79	≈ 2,84	-
3838/3938.387.	□.0	387	415	≈ 3,85	≈ 2,87	-
3838/3938.400.	□.0	400	427	≈ 3,90	≈ 2,90	-

Hot Chips up to 850°C

E-Tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order example: **Full E-Tube made of HT: 7838.30.150.0.HT**
Lids made of HT: **7838.30.HTE.150.0**
*for long travels. Upon request
Further Information: www.igus.de/en/HT
Delivery time up to 4 weeks!



System E4/4
Inner height: 42 mm

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Available bending radii

R [mm] **075*** **100*** **115*** 125 150 170 200 215 250 300 350

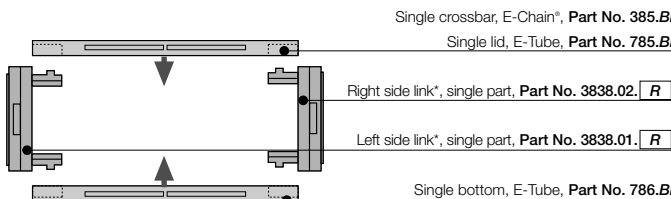
Supplement Part No. with required radius. Example: 3838.400.300.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 67 mm/link - Links/m = 15

*Removable lid only, no hinged option · **not available for R7838

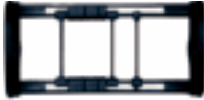


Extender crossbar for large diameter hoses ▶ page 7.242

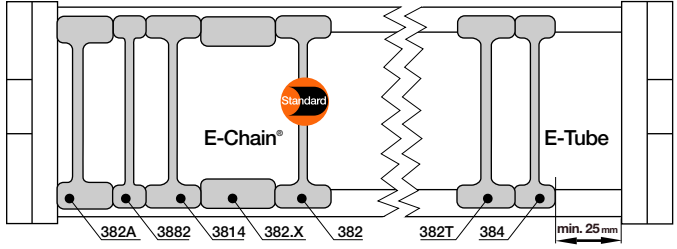


Part No. E-Chain® - links, single parts

*View from the fixed point of the E-Chain®/E-Tube



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 25 mm (E-Tube)!



Vertical separator
381



Vertical separator
with a narrow base
3881



Vertical separator
381T



Spacer
381.XX



Locking separator
3804



Locking separator
383



Asymmetric
separator 381A

Vertical separator for E-Chains*	2,5
unassembled	381
assembled	382



Vertical separator* for E-Chains*	2,5
unassembled	3881
assembled	3882



Vertical separator for E-Tubes	3
unassembled	381T
assembled	382T



Spacer*	
for E-Chains*	
unassembled	381.XX
assembled	382.XX



Locking separator for E-Chains*	2,5
unassembled	3804
assembled	3814



Locking separator for E-Tubes	2,5
unassembled	383
assembled	384



Asymmetric separator for E-Chains*	2,5
unassembled	381A
assembled	382A



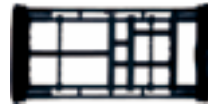
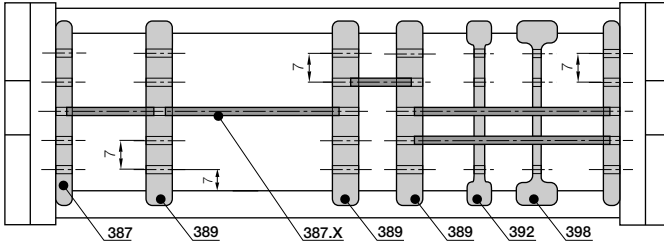
*For side-mounted applications

Option 1: Vertical separators and spacers

- **Standard separator 381 for E-Chains®** offers safe stability due to its broad foot design, also when used with thick cables or hoses.
- **Vertical separator 3881 with a narrow foot (7 mm) for E-Chains®** with applications where a large number of small cables need to be individually separated.
- The **vertical separator 381T for E-Tubes** clamps to the fixed radius and remains free along the other radius to facilitate lid removal. If installing these yourself, please ensure that they are identically aligned.
- Separators (e.g. "side mounted") for E-Chains® can be fixed in their position with **spacers 381.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15 and 20)

Additionally:

- **Locking separator 3804 for E-Chains®** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment.
- **Locking separator 383 for E-Chains®** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment.
- **Asymmetric separator 381A for E-Chains®** (not for E-Tubes) with an 14-mm base, for combinations between spacers of different widths and vertical separators in side-mounted



For use with many cables of differing diameters. E-Chains® and E-Tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

Option 2: Shelves

● Side plates 386, middle plates 388 and shelves 386.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 5 different heights (in 7 mm increments).

● Slotted separators 391 are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

● The unilateral open slotted separator 397 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate for E-Chains®/E-Tubes	
unassembled	386
assembled	387

Middle plate for E-Chains®/E-Tubes	
unassembled	388
assembled	389

Slotted separator for E-Chains®/E-Tubes	
unassembled	391
assembled	392

Open slotted separator for E-Chains®/E-Tubes	
unassembled	397
assembled	398

Width X [mm]	Part No. unassembled	Part No. assembled
018	386.18	387.18
023	386.23	387.23
025	386.25	387.25
028	386.28	387.28
033	386.33	387.33
043	386.43	387.43
050	386.50	387.50
054	386.54	387.54
062	386.62	387.62

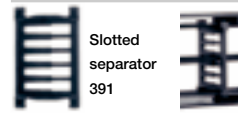
Width X [mm]	Part No. unassembled	Part No. assembled
075	386.75	387.75
087	386.87	387.87
100	386.100	387.100
108	386.108	387.108
125	386.125	387.125
150	386.150	387.150
175	386.175	387.175
200	386.200	387.200
208	386.208	387.208



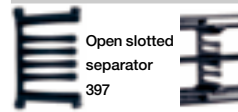
Side plate 386



Middle plate 388



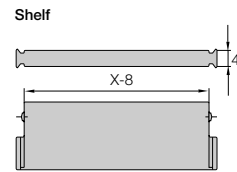
Slotted separator 391



Open slotted separator 397



Shelf 386.X

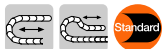


Shelf

System E4/4
Inner height: 42 mm

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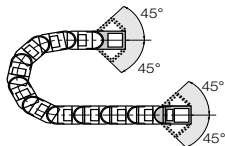


The Standard - Option KMA* - pivoting

- Recommended for unsupported and gliding applications
- Confined installation conditions
- Option - integrated C-profile strain relief device with Chainfix clip or strain relief tiwrap plates
- Corrosion resistant
- Universal mountable with attachment capability on all sides

*KMA = Polymer Metal Mounting Bracket

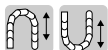
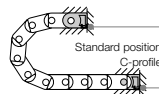
Moving end
38380/78380...1



Fixed end
38380/78380...2



The attachment variants arising automatically by the choice of the KMA mounting bracket



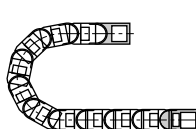
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universal mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

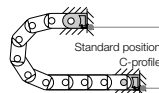
Moving end
39380/79380...1



Fixed end
39380/79380...2



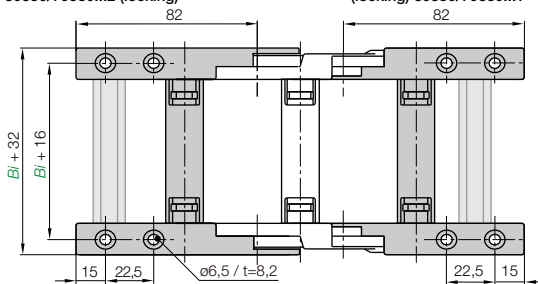
The attachment variants arising automatically by the choice of the KMA mounting bracket



Fixed end

38380/78380...2 (pivoting)

39380/79380...2 (locking)



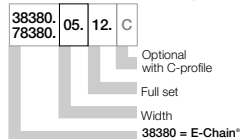
Moving end

(pivoting) 38380/78380...1

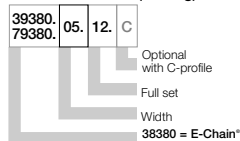
(locking) 39380/79380...1

Dimensions and order configurations

Part No. structure (pivoting)



Part No. structure (locking)



Width index	Part No. full set		C-profile option [mm]	Bi	Width index	Part No. full set		C-profile option [mm]	Bi
	pivoting	locking				pivoting	locking		
.05	▶ 38380	▶ 78380	▶ .05.12	50	.23	▶ 38380	▶ 39380	▶ .23.12	225
.06	▶ 38380	▶ 39380	▶ .06.12	68	.237	▶ 38380	▶ 39380	▶ .237.12	237
.07	▶ 38380	▶ 78380	▶ .07.12	75	.25	▶ 38380/78380	▶ 39380/79380	▶ .25.12	250
.087	▶ 38380	▶ 39380	▶ .087.12	87	.262	▶ 38380	▶ 39380	▶ .262.12	262
.10	▶ 38380	▶ 78380	▶ .10.12	100	.28	▶ 38380	▶ 39380	▶ .28.12	275
.11	▶ 38380	▶ 78380	▶ .11.12	108	.29	▶ 38380	▶ 39380	▶ .29.12	287
.112	▶ 38380	▶ 39380	▶ .112.12	112	.30	▶ 38380/78380	▶ 39380/79380	▶ .30.12	300
.12	▶ 38380	▶ 78380	▶ .12.12	125	.312	▶ 38380	▶ 39380	▶ .312.12	312
.137	▶ 38380	▶ 39380	▶ .137.12	137	.325	▶ 38380	▶ 39380	▶ .325.12	325
.15	▶ 38380	▶ 78380	▶ .15.12	150	.337	▶ 38380	▶ 39380	▶ .337.12	337
.162	▶ 38380	▶ 39380	▶ .162.12	162	.350	▶ 38380	▶ 39380	▶ .350.12	350
.17	▶ 38380	▶ 78380	▶ .17.12	175	.362	▶ 38380	▶ 39380	▶ .362.12	362
.18	▶ 38380	▶ 39380	▶ .18.12	187	.375	▶ 38380	▶ 39380	▶ .375.12	375
.187	▶ 38380	▶ 39380	▶ .187.12	187	.387	▶ 38380	▶ 39380	▶ .387.12	387
.20	▶ 38380	▶ 78380	▶ .20.12	200	.400	▶ 38380	▶ 39380	▶ .400.12	400
.212	▶ 38380	▶ 39380	▶ .212.12	212					

Full set, for both ends:

38380, 05, 12

Single-part order:

38380, 05, 1

Mounting bracket moving end

38380, 05, 2

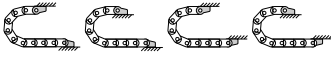
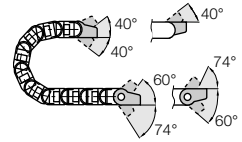
Mounting bracket fixed end



Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
38380.1



Possible installation conditions -

Further installation angles ► installation sketch

Fixed end
38380.2

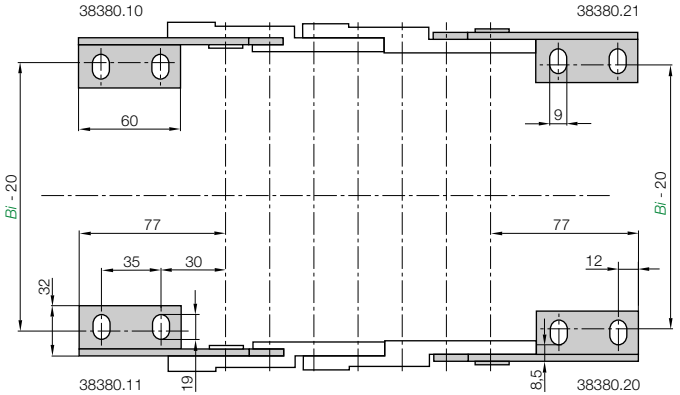
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E-mail: info@igus.de

Moving end
38380.1

Fixed end
38380.2



For E-Chain®	Part No. full set	Bi [mm]	For E-Chain®	Part No. full set	Bi [mm]
3838-3938-7838.05 ►	38380.12	50	3838-3938.23 ►	38380.12	225
3838-3938.06 ►	38380.12	68	3838-3938.237 ►	38380.12	237
3838-3938-7838.07 ►	38380.12	75	3838-3938-7838.25 ►	38380.12	250
3838-3938.087 ►	38380.12	87	3838-3938.262 ►	38380.12	262
3838-3938-7838.10 ►	38380.12	100	3838-3938.28 ►	38380.12	275
3838-3938-7838.11 ►	38380.12	108	3838-3938.29 ►	38380.12	287
3838-3938.112 ►	38380.12	112	3838-3938-7838.30 ►	38380.12	300
3838-3938-7838.12 ►	38380.12	125	3838-3938.312 ►	38380.12	312
3838-3938.137 ►	38380.12	137	3838-3938.325 ►	38380.12	325
3838-3938-7838.15 ►	38380.12	150	3838-3938.337 ►	38380.12	337
3838-3938.162 ►	38380.12	162	3838-3938.350 ►	38380.12	350
3838-3938-7838.17 ►	38380.12	168	3838-3938.362 ►	38380.12	362
3838-3938.18 ►	38380.12	175	3838-3938.375 ►	38380.12	375
3838-3938.187 ►	38380.12	187	3838-3938.387 ►	38380.12	387
3838-3938-7838.20 ►	38380.12	200	3838-3938.400 ►	38380.12	400
3838-3938.212 ►	38380.12	212			

38380.12 Full set, 4 parts

2 with pin / 2 with bore

Single-part order:

38380.1 Mounting bracket moving end, 1 part left / right

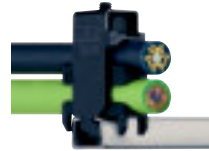
38380.2 Mounting bracket fixed end, 1 part left / right

Other strain relief elements

► chapter 10

Chainfix clamps for the C-profile

Part No. single clamps		Part No. double clamps		Part No. triple clamps		Cable
steel	stainless steel	steel	stainless steel	steel	stainless steel	ø [mm]
CFX12.1	CFX12.1.E	CFX12.2	CFX12.2.E	CFX12.3	-	06 - 12
CFX14.1	CFX14.1.E	CFX14.2	CFX14.2.E	CFX14.3	-	12 - 14
CFX16.1	CFX16.1.E	CFX16.2	CFX16.2.E	CFX16.3	-	14 - 16
CFX18.1	CFX18.1.E	CFX18.2	CFX18.2.E	CFX18.3	-	16 - 18
CFX20.1	CFX20.1.E	CFX20.2	CFX20.2.E	CFX20.3	-	18 - 20
CFX22.1	CFX22.1.E	CFX22.2	CFX22.2.E	CFX22.3	-	20 - 22
CFX26.1	CFX26.1.E	CFX26.2	CFX26.2.E	-	-	22 - 26
CFX30.1	CFX30.1.E	CFX30.2	CFX30.2.E	-	-	26 - 30
CFX34.1	CFX34.1.E	CFX34.2	CFX34.2.E	-	-	30 - 34
CFX38.1	CFX38.1.E	-	-	-	-	34 - 38
CFX42.1	CFX42.1.E	-	-	-	-	38 - 42



igus® Chainfix steel clamps and Chainfix stainless-steel clamps - max. pull forces, adjustable with hexagon socket. Available as single, double or triple clamps. **Details ▶ chapter 10**

System E4/4
Inner height: 42 mm

Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	CFC-08-M	CFC-08-C
08 - 12	CFC-12-M	CFC-12-C
12 - 16	CFC-16-M	CFC-16-C
16 - 20	CFC-20-M	CFC-20-C
20 - 24	CFC-24-M	CFC-24-C

Chainfix Clip - Modular snap-on strain relief device for C-profile

Available for all igus® E-ChainSystems® with C-profiles and also suitable for assembly in the KMA mounting brackets and clip-on strain relief for crossbars. High pull forces, plug-in modular snap-on strain relief device. **Details ▶ chapter 10**



Part No.	ø max. conduit [mm]	Width [mm]
CFN.20	20	10,8
CFN.30.52	30	16,8
CFN.20.N35	20	20,0

Chainfix Nugget for the C-Profile

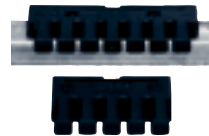
Strain relief for the fixation of cables up to a diameter of Ø 30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-hressed cable strap, very small space requirement. **Details ▶ chapter 10**



Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

Chainfix tiwrap plates with clip-on connection for the C-profile

Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all E-Chains® with KMA and integrated C-profile. **Details ▶ chapter 10**

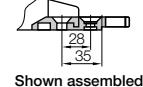
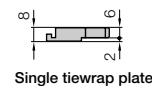
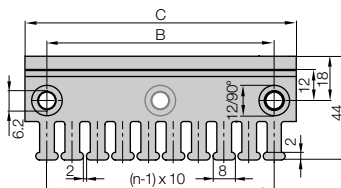


Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(- = no / + = yes)

Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**

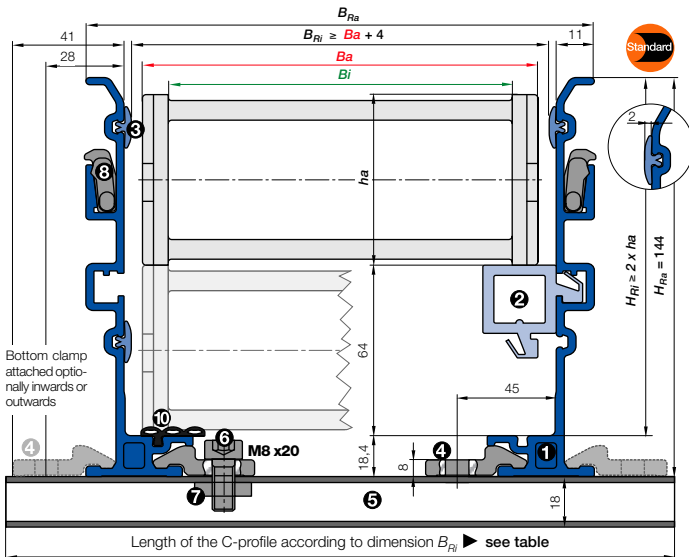


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▶ page 7.223

- B_a = Outer width E-Chains* / E-Tube
- B_i = Inner width E-Chains* / E-Tube
- h_a = Outer height E-Chains* / E-Tube
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- B_{Ri} = Inner trough width ► depends on dim. B_a
- B_{Ra} = Outer trough width
- n_{Mon} = Number of installation sets (left/right)
- n_{Ri} = Number of troughs sets (left/right)
- $H_{Ri} \geq 2 \cdot h_a$
- $B_{Ri} \geq B_a + 4$
- = Guide trough set ● = Glide bar
- = Installation set "Basic" ● = C-profile

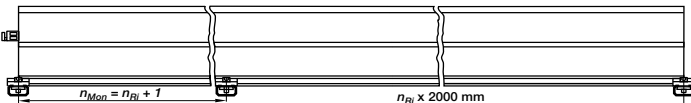


- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, steel galvanized ⑥ Screw M8 x 20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic



Order example: Length of travel 30 m - Center mounted for Series 3838.20.300.0 with $B_{Ri} = 231$

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) **Part No. 973.30.SL**
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) **Part No. 973.31.SL**
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets "Basic" **Part No. 960.40.300**
- Module for the fixed end
Order text: 1 set **Part No. 973.81**
- Option:** For an additional noise dampening with silencer profile, please add Index A - Example: **Part No. 973.30.SLA**



Principle sketch: Number of installation sets to be installed = **Number of trough sections + 1**



A quick fix for mounting the stationary end of an E-Chain®
With this module for the fixed end, fast and easy mounting onto the Aluminum "SuperTrough" is now possible without any drilling. Fast mounting of the E-Chain® by clamping onto the aluminum trough
● Quick relocation of the stationary end ● No drilling necessary ► **page 9.16**

Installation set "Basic" with C-profile

Bottom Clamp attached optionally inwards or outwards

3838.05.300.0 ► Order example

	Part No.	
	B_{Ri} attached inwards [mm]	attached outwards
.05	81	960.40.200
.06	99	960.40.225
.07	106	960.40.225
.087	119	960.40.175
.10	131	960.40.200
.11	139	960.40.200
.112	144	960.40.200
.12	156	960.40.225
.137	169	960.40.225
.15	181	960.40.250
.162	194	960.40.250
.17	199	960.40.250
.18	206	960.40.275
.187	219	960.40.275
.20	231	960.40.300
.212	244	960.40.300
.23	256	960.40.325
.237	269	960.40.325
.25	281	960.40.350
.262	294	960.40.350
.28	306	960.40.375
.29	319	960.40.375
.30	331	960.40.400
.312	344	960.40.400
.325	356	960.40.425
.337	369	960.40.425
.350	381	960.40.450
.362	394	960.40.450
.375	406	960.40.475
.387	419	960.40.475
.400	431	960.40.500

Insert for the installation set "Heavy-Duty": **973.50.XXX** instead of (960.40.XXX) on the right column "attached outwards"

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Fax +49- (0) 22 03-96 49-222

igus® GmbH
51147 Cologne

Internet: www.igus.eu
E-mail: info@igus.de

Price index



Side-mounted - unsupported



ESD classification:
Electrically conductive ESD/ATEX version upon request



High torsional rigidity



Opening E-Chains: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (E-Tubes) - Insert screwdriver into the slot, release by lever action



When to use the Series 4040/4140/R8840:

- When high torsional forces are expected
- For side-mounted applications involving large unsupported lengths
- For long-term operation in very moist environments
- Also available as Rol E-Chain®



When not to use it:

- If a quieter version is required
▶ Series E4.56, page 7.62
- If a simple and low-cost solution is required
▶ Series 14040/R18840, page 7.124
- When very long travels or high additional loads are involved
▶ Series 4040HD, page 7.260

- ① High side-mount stability due to undercut
- ② High torsional rigidity
- ③ Closed and open styles can be combined
- ④ Hinged snap-open removable lids of E-Tube
- ⑤ Numerous interior separation possibilities
- ⑥ Crossbars on E-Chains® are removable along both radii
- ⑦ Lateral glide surfaces for side-mounted operation
- ⑧ Wide, rounded plastic crossbars - cable friendly
- ⑨ KMA mounting brackets with attachment points on all sides
- ⑩ Mounting brackets with integrated strain relief available, locking or pivoting
- ⑪ E-Chains® also available with reverse bending radius "RBR"

! "Heavy-Duty" size available. Greater unsupported length for higher loads and travels.
Also available as Rol E-Chain® version



Rol E-Chain® Series 4040R/8840R available upon request



Order example complete E-Chain®

Please indicate chain-lengths or number of links Example: 5 m or 55 links

5 m 4040.30.300.0

E-Chain®

with 2 separators 411 assembled every 2nd link

Interior separation

1 set 4040.30.12C

Mounting bracket

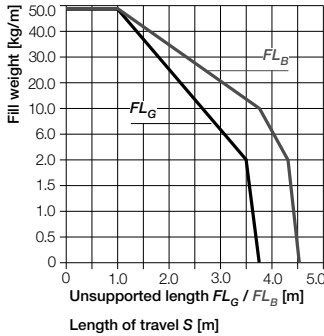
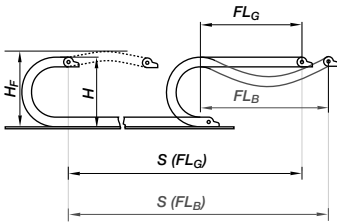


Unsupported length

FL_G = with straight upper run

FL_B = with permitted sag

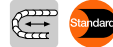
Further information ► **Design, page 1.12**



- S = Length of travel
 - R = Bending radius
 - H = Nominal clearance height
 - H_F = Required clearance height
 - H_{RI} = Trough inner height
 - D = Overlength E-Chain® radius in final position
 - $K = \pi \cdot R + \text{"safety"}$
 - D_2 = Over length - long travels, gliding
 - K_2 = *Further add-on
 - H_2 = *Mounting height
- *if the mounting bracket location is set lower

Other installation methods

- Vertical, hanging ≤ 100 m
- Vertical, standing ≤ 6 m
- Side mounted, un supp. ≤ 3 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request



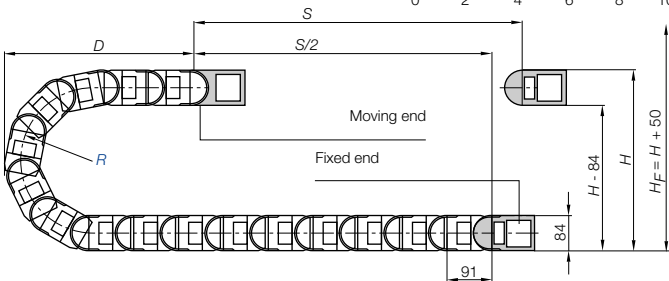
Short travels - unsupported

Unsupported E-Chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted.

The required clearance height:

$$H_F = H + 50 \text{ mm}$$

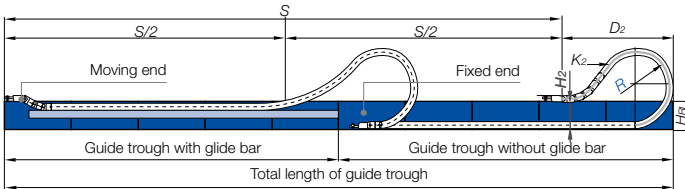
(with 3,0 kg/m fill weight)



Pitch = 91 mm/link Links/m = 11 (1001 mm) Chain length = $S/2 + K$

R	135	150	175	200	240	250	300	350	400	500
H_{25}^0	360	385	435	485	565	585	685	785	885	1085
D	270	285	310	335	375	385	435	485	535	635
K	650	750	825	900	1020	1050	1225	1340	1450	1775
H_2	360	266	266	266	266	266	266	266	266	266
D_{25}^{*25}	270	480	600	730	930	940	1180	1440	1530	1850
K_2	650	819	1092	1274	1547	1547	2002	2366	2548	3185

Long travel lengths from 10 m to max. 300 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 300 m)

In this case the E-Chain® upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



Details of material properties

► page 1.38

56

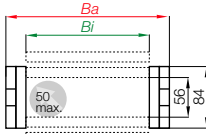
System E4/4
Inner height: 56 mm

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► page 7.223

igus® E-ChainSystems®

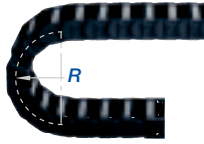


Part No. structure

4040. 30. 250. 0



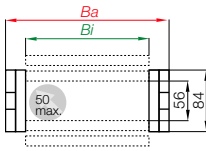
Series 4040- E-Chain® with crossbars every link



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides



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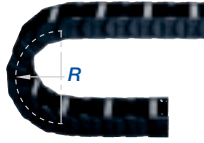


Part No. structure

4140. 30. 250. 0



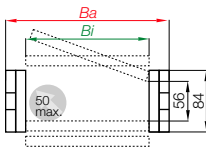
Series 4140 - E-Chain® with crossbars every 2nd link



- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price



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51147 Cologne

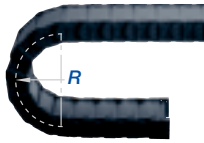


Part No. structure

8840. 30. 250. 0



Series R8840 - Fully enclosed E-Tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.



Internet: www.igus.eu
E-mail: info@igus.de

Rol instead of gliding: Rol E-Chain®

Special solution for long travels. 75% less drive power (gliding application) with igus® Rol E-Chain®.
Series 4040R - Order example 4040R.30.250.0
Further information: www.igus.de/en/role
or phone: +49-0 22 03-96 49-800



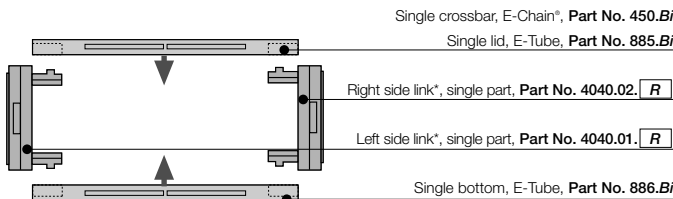
Part No.	<i>Bi</i> [mm]	<i>Ba</i> [mm]	4040 [kg/m]	4140 [kg/m]	R8840 [kg/m]	
4040/4140.05.	0	50	86	≈ 3,65	≈ 3,58	-
4040/4140.06.	0	65	101	≈ 3,67	≈ 3,60	-
4040/4140/8840.07.	0*	75	111	≈ 3,78	≈ 3,70	≈ 4,24
4040/4140.08.	0	87	123	≈ 3,83	≈ 3,75	-
4040/4140/8840.10.	0	100	136	≈ 3,96	≈ 3,78	≈ 4,52
4040/4140.11.	0	112	149	≈ 4,09	≈ 3,85	-
4040/4140/8840.12.	0	125	161	≈ 4,16	≈ 3,88	≈ 4,88
4040/4140.13.	0	137	174	≈ 4,29	≈ 3,95	-
4040/4140/8840.15.	0	150	186	≈ 4,36	≈ 3,98	≈ 5,31
4040/4140.16.	0	162	199	≈ 4,47	≈ 4,04	-
4040/4140.17.	0	175	211	≈ 4,58	≈ 4,09	-
4040/4140.18.	0	187	224	≈ 4,69	≈ 4,15	-
4040/4140/8840.20.	0	200	236	≈ 4,71	≈ 4,16	≈ 5,89
4040/4140.21.	0	212	249	≈ 4,82	≈ 4,21	-
4040/4140.22.	0	225	261	≈ 4,88	≈ 4,25	-
4040/4140.23.	0	237	274	≈ 5,02	≈ 4,31	-
4040/4140/8840.25.	0	250	286	≈ 5,10	≈ 4,36	≈ 6,61
4040/4140.26.	0	262	299	≈ 5,19	≈ 4,40	-
4040/4140/8840.27.	0	275	311	≈ 5,30	≈ 4,46	≈ 6,89
4040/4140.28.	0	287	324	≈ 5,32	≈ 4,47	-
4040/4140/8840.30.	0	300	336	≈ 5,54	≈ 4,58	≈ 7,27
4040/4140.31.	0	312	349	≈ 5,58	≈ 4,60	-
4040/4140.32.	0	325	361	≈ 5,63	≈ 4,62	-
4040/4140.33.	0	337	374	≈ 5,81	≈ 4,71	-
4040/4140/8840.35.	0	350	386	≈ 5,96	≈ 4,79	≈ 8,02
4040/4140.36.	0	362	399	≈ 5,96	≈ 4,79	-
4040/4140.37.	0	375	411	≈ 5,98	≈ 4,80	-
4040/4140.38.	0	387	424	≈ 6,07	≈ 4,84	-
4040/4140/8840.40.	0	400	436	≈ 6,27	≈ 4,94	≈ 8,98
4040/4140.41.	0	412	449	≈ 6,42	≈ 5,02	-
4040/4140.42.	0	425	461	≈ 6,58	≈ 5,09	-
4040/4140.43.	0	437	474	≈ 6,64	≈ 5,13	-
4040/4140.45.	0	450	486	≈ 6,71	≈ 5,16	-
4040/4140/8840.46.	0	462	499	≈ 6,73	≈ 5,19	≈ 9,44
4040/4140.47.	0	475	511	≈ 6,86	≈ 5,24	-
4040/4140.48.	0	487	524	≈ 6,88	≈ 5,28	-
4040/4140.50.	0	500	536	≈ 7,00	≈ 5,30	-
4040/4140.51.	0	512	549	≈ 7,02	≈ 5,31	-
4040/4140.52.	0	525	561	≈ 7,06	≈ 5,34	-
4040/4140.53.	0	537	574	≈ 7,22	≈ 5,41	-
4040/4140.55.	0	550	586	≈ 7,70	≈ 5,65	-
4040/4140.60.	0	600	636	≈ 7,90	≈ 5,75	-

Available bending radii

R [mm] 135** 150 175 200 240 250 300 350 400 500

Supplement Part No. with required radius. Example: 4040.30.300.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 91 mm/link · Links/m = 11



Hot Chips up to 850°C

E-Tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid-HT" material. Order example:

Full E-Tube made of HT:

8840.40.150.0.HT

Lids made of HT:

8840.40.HTE.150.0

for long travels upon request

Further information:

www.igus.de/en/HT

Delivery time
up to 4 weeks!

Extreme Glider...

...with up to 70% larger glide surface. For high additional loads and high gliding speeds. Gliding applications without additional elements as well as 150% more wear allowance and improvement of service life by factor 4!

Order example:

4040.35G.250.0

4040.45G.250.0

Further information:

phone +49-0 22 03-96 49-800



* Removable lid only, no hinged option

** not available for R8840



Extender crossbar for large diameter hoses ▶ page 7.254

Part No. E-Chain® - links, single parts

*View from the fixed point of the E-Chain®/E-Tube

System E4/4
Inner height: 56 mm

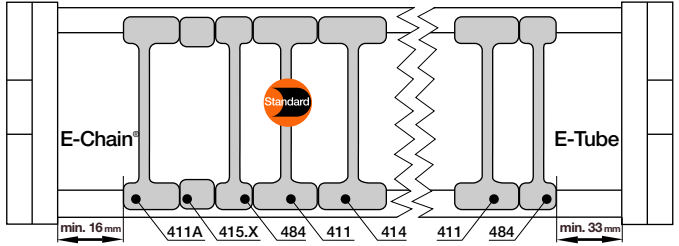
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▶ page 7.223



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 33 mm (E-Tube) and 16 mm (E-Chain)!



Vertical separator
401



Vertical separator
483



Spacer
405.XX



Locking separator
404



Vertical separator
406



Asymmetric
separator 401A



Vertical separator for E-Chains®/E-Tubes	
unassembled	401
assembled	411



Vertical separator for E-Chains®/E-Tubes	
unassembled	483
assembled	484



Spacer® for E-Chains®	
unassembled	405.XX
assembled	415.XX



Locking separator for E-Chains®	
unassembled	404
assembled	414



Vertical separator for E-Tubes	
unassembled	406
assembled	416



Asymmetric separator for E-Chains®	
unassembled	401A
assembled	411A



*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 401** for E-Chains®/E-Tubes offers safe stability due to its broad foot design, also when used with thick cables or hoses.

● **Vertical separator 483 with a narrow foot** for E-Chains® and E-Tubes with applications where a large number of small cables need to be individually separated.

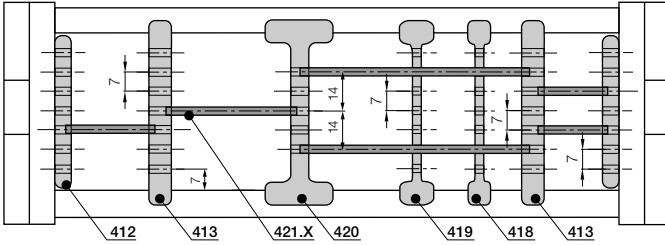
● Separators (e.g. "side mounted") for E-Chains® can be fixed in their position with **Spacers 405.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels)
XX = width of the spacer (available 10, 15, 20, 30 and 40 mm)

Additionally:

● **Locking separator for E-Chains® 404** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment

● **Locking separator 406 for E4-Tubes** - safe fitting locked on lid or bottom of the Tube and sideways slideable. The opposing lid or bottom can easily be opened and closed. Especially capable if many separators need to be assembled on a tight inner width

● **Asymmetric separator 401A for E-Chains®** with an 18-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.



For use with many cables of differing diameters. E-Chains[®] and E-Tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

Option 2: Shelves

● Side plates 402, middle plates 403 and shelves 420.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments).

● Locking vertical separator 410, slotted combined with shelves (only for E-Chains[®]).

● Slotted separators 408 are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

● The unilateral open slotted separator 409 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate for E-Chains [®] /E-Tubes	
unassembled	402
assembled	412

Middle plate for E-Chains [®] /E-Tubes	
unassembled	403
assembled	413

Locking vertical separator for E-Chains [®]	
unassembled	410
assembled	420

Slotted separator for E-Chains [®] /E-Tubes	
unassembled	408
assembled	418

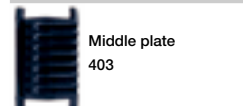
Open slotted separator for E-Chains [®] /E-Tubes	
unassembled	409
assembled	419

Width X [mm]	Part No. unassembled	Part No. assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28
033	420.33	421.33
043	420.43	421.43
050	420.50	421.50
062	420.62	421.62

Width X [mm]	Part No. unassembled	Part No. assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200



Side plate 402



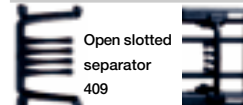
Middle plate 403



Locking vertical separator 410



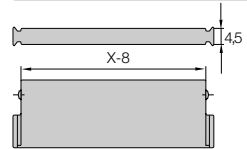
Slotted separator 408



Open slotted separator 409



Shelf 420.X



Additional elements for interior separation

Center crossbar	
unassembled	405
assembled	415

Center crossbar - was developed for applications with a large number of thin cables. The center crossbar offers the option of subdividing the E-Chain[®] independently into upper and lower halves.

Rollclip	
unassembled	489.27
assembled	490.27

Rollclip - minimizes abrasion of particularly sensitive hoses. The Rollclip is simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the chain and hose.

Roller separator	
unassembled	429
assembled	430

Roller separator - performs a similar function to the Rollclip, but doubles as a separator.

System E4/4
Inner height: 56 mm

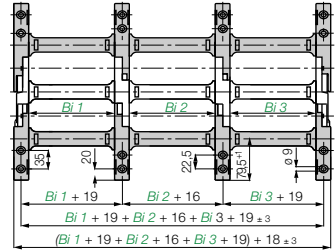
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Extension links - for extremely wide E-Chains® up to 3,0 m

- For applications in which particularly high fill weights necessitate extremely wide E-Chains® (up to 3000 mm)
- The extension link design allows virtually limitless side-by-side attachment of chains
- The unsupported length of a chain can be increased when additional loads are required
- Extension links can be used with E-Chains®, E-Tubes or as a combination of both
- They are suitable for unsupported and gliding applications in a guide trough
- E-Chains® with extension links are attached with KMA or steel mounting brackets

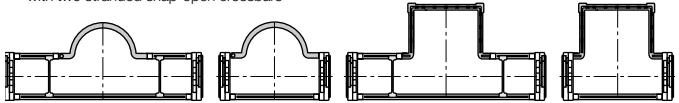


Part No. structure
4040.10 /20 /10. .0
4040.Bi1/Bi2/Bi3. .0



Extender crossbars - careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 245 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars



Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout

Round extender crossbar with snap-open crossbars Attached directly to the side link Square extender crossbar with snap-open crossbars Attached directly to the side link

Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossb.
450.15.RHD115	115	○	-	+
450.17.RD115	115	○	+	-
450.25.D150	150	□	+	-
450.30.D200	180	□	+	-
450.35.D250	195	□	+	-
450.40.D300	245	□	+	-
450.20.HD150	150	□	-	+
450.25.HD200	180	□	-	+
450.30.HD250	195	□	-	+

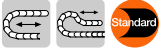
○ = round □ = square + = yes / - = no



E4 clip-on cable binder

- For side-mounted applications ● Serves as a clip-on, lateral guide for hoses and cables on E-Chains®
- The loops can be adjusted as required ● Compatible with many E4 E-Chains® ● Stylish and economical
- One clip and one locking band are needed for each chain link ● Call us if you have any questions on project planning

Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm

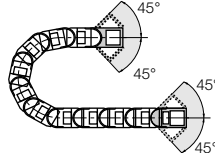


The Standard - Option KMA* - pivoting

- Recommended for unsupported and gliding applications
- Confined installation conditions
- Option - integrated C-profile strain relief device with Chainfix clip or strain relief tiwrap plates
- Corrosion resistant
- Universal mountable with attachment capability on all sides

*KMA = Polymer Metal Mounting Bracket

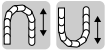
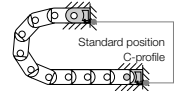
Moving end
40400/88400...1



Fixed end
40400/88400...2



The attachment variants arising automatically by the choice of the KMA mounting bracket



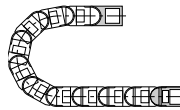
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universal mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

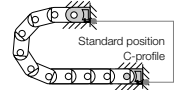
Moving end
41400/89400...1



Fixed end
41400/89400...2

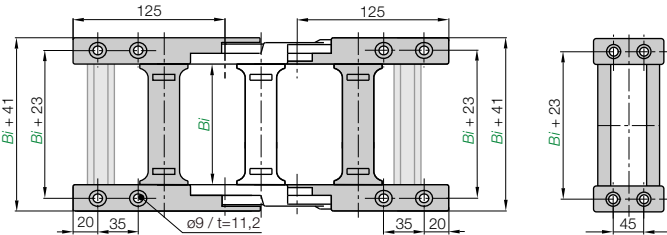


The attachment variants arising automatically by the choice of the KMA mounting bracket



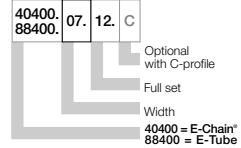
Fixed end
40400/88400...2 (pivoting)
41400/89400...2 (locking)

Moving end
(pivoting) 40400/88400...1
(locking) 41400/89400...1

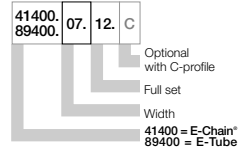


Dimensions and order configurations

Part No. structure (pivoting)



Part No. structure (locking)



Width index	Part No. full set			C-profile option [mm]	Width index	Part No. full set			C-profile option [mm]
	pivoting	locking	Bi			pivoting	locking	Bi	
.05.	▶ 40400	41400	.05.12	50	.31.	▶ 40400	41400	.31.12	312
.06.	▶ 40400	41400	.06.12	65	.32.	▶ 40400	41400	.32.12	325
.07.	▶ 40400/88400	41400/89400	.07.12	75	.33.	▶ 40400	41400	.33.12	337
.08.	▶ 40400	41400	.08.12	87	.35.	▶ 40400/88400	41400/89400	.35.12	350
.10.	▶ 40400/88400	41400/89400	.10.12	100	.36.	▶ 40400	41400	.36.12	362
.11.	▶ 40400	41400	.11.12	112	.37.	▶ 40400	41400	.37.12	375
.12.	▶ 40400/88400	41400/89400	.12.12	125	.38.	▶ 40400	41400	.38.12	387
.13.	▶ 40400	41400	.13.12	137	.40.	▶ 40400/88400	41400/89400	.40.12	400
.15.	▶ 40400/88400	41400/89400	.15.12	150	.41.	▶ 40400	41400	.41.12	412
.16.	▶ 40400	41400	.16.12	162	.42.	▶ 40400	41400	.42.12	425
.17.	▶ 40400	41400	.17.12	175	.43.	▶ 40400	41400	.43.12	437
.18.	▶ 40400	41400	.18.12	187	.45.	▶ 40400	41400	.45.12	450
.20.	▶ 40400/88400	41400/89400	.20.12	200	.46.	▶ 40400/88400	41400/89400	.46.12	462
.21.	▶ 40400	41400	.21.12	212	.47.	▶ 40400	41400	.47.12	475
.22.	▶ 40400	41400	.22.12	225	.48.	▶ 40400	41400	.48.12	487
.23.	▶ 40400	41400	.23.12	237	.50.	▶ 40400	41400	.50.12	500
.25.	▶ 40400/88400	41400/89400	.25.12	250	.51.	▶ 40400	41400	.51.12	512
.26.	▶ 40400	41400	.26.12	262	.52.	▶ 40400	41400	.52.12	525
.27.	▶ 40400/88400	41400/89400	.27.12	275	.53.	▶ 40400	41400	.53.12	537
.28.	▶ 40400	41400	.28.12	287	.55.	▶ 40400	41400	.55.12	550
.30.	▶ 40400/88400	41400/89400	.30.12	300	.60.	▶ 40400	41400	.60.12	600

Full set, for both ends:

40400.[05].[12]

Single-part order:

40400.[05].[1]

Mounting bracket moving end

40400.[05].[2]

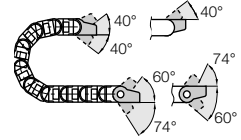
Mounting bracket fixed end



Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
40400.1



Fixed end
40400.2

Possible installation conditions -

Further installation angles ► installation sketch

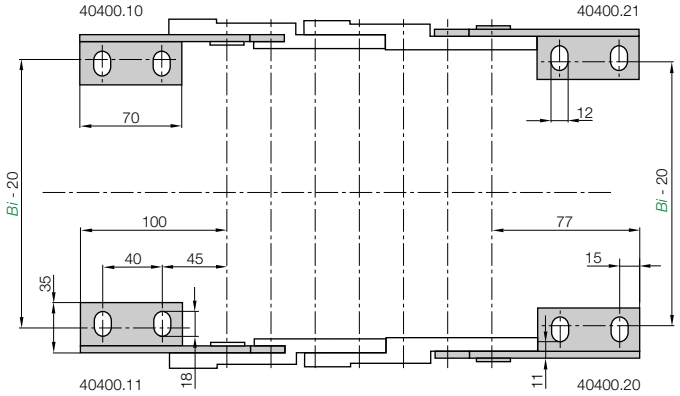
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51147 Cologne

Internet: www.igus.eu
E-mail: info@igus.de

Moving end
40400.1

Fixed end
40400.2



For E-Chain*	Part No. full set	Bi [mm]	For E-Chain*	Part No. full set	Bi [mm]
4040-4140.05	40400.12	50	4040-4140.31	40400.12	312
4040-4140.06	40400.12	65	4040-4140.32	40400.12	325
4040-4140-8840.07	40400.12	75	4040-4140.33	40400.12	337
4040-4140-8840.08	40400.12	87	4040-4140-8840.35	40400.12	350
4040-4140-8840.10	40400.12	100	4040-4140.36	40400.12	362
4040-4140.11	40400.12	112	4040-4140.37	40400.12	375
4040-4140-8840.12	40400.12	125	4040-4140.38	40400.12	387
4040-4140.13	40400.12	137	4040-4140-8840.40	40400.12	400
4040-4140-8840.15	40400.12	150	4040-4140.41	40400.12	412
4040-4140.16	40400.12	162	4040-4140.42	40400.12	425
4040-4140.17	40400.12	175	4040-4140.43	40400.12	437
4040-4140.18	40400.12	187	4040-4140.45	40400.12	450
4040-4140-8840.20	40400.12	200	4040-4140-8840.46	40400.12	462
4040-4140.21	40400.12	212	4040-4140.47	40400.12	475
4040-4140.22	40400.12	225	4040-4140.48	40400.12	487
4040-4140.23	40400.12	237	4040-4140.50	40400.12	500
4040-4140-8840.25	40400.12	250	4040-4140.51	40400.12	512
4040-4140.26	40400.12	262	4040-4140.52	40400.12	525
4040-4140-8840.27	40400.12	275	4040-4140.53	40400.12	537
4040-4140.28	40400.12	287	4040-4140.55	40400.12	550
4040-4140-8840.30	40400.12	300	4040-4140.60	40400.12	600

40400.12 Full set, 4 parts
2 with pin / 2 with bore

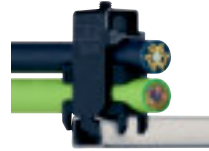
Single-part order:

40400.1 Mounting bracket
moving end, 1 part left / right

40400.2 Mounting bracket
fixed end, 1 part left / right

Chainfix clamps for the C-profile

Part No. single clamps		Part No. double clamps		Part No. triple clamps		Cable
steel	stainless steel	steel	stainless steel	steel	stainless steel	ø [mm]
CFX12.1	CFX12.1.E	CFX12.2	CFX12.2.E	CFX12.3	-	06 - 12
CFX14.1	CFX14.1.E	CFX14.2	CFX14.2.E	CFX14.3	-	12 - 14
CFX16.1	CFX16.1.E	CFX16.2	CFX16.2.E	CFX16.3	-	14 - 16
CFX18.1	CFX18.1.E	CFX18.2	CFX18.2.E	CFX18.3	-	16 - 18
CFX20.1	CFX20.1.E	CFX20.2	CFX20.2.E	CFX20.3	-	18 - 20
CFX22.1	CFX22.1.E	CFX22.2	CFX22.2.E	CFX22.3	-	20 - 22
CFX26.1	CFX26.1.E	CFX26.2	CFX26.2.E	-	-	22 - 26
CFX30.1	CFX30.1.E	CFX30.2	CFX30.2.E	-	-	26 - 30
CFX34.1	CFX34.1.E	CFX34.2	CFX34.2.E	-	-	30 - 34
CFX38.1	CFX38.1.E	-	-	-	-	34 - 38
CFX42.1	CFX42.1.E	-	-	-	-	38 - 42



igus® Chainfix steel clamps and Chainfix stainless-steel clamps - max. pull forces, adjustable with hexagon socket. Available as single, double or triple clamps. **Details ▶ chapter 10**

System E4/4
Inner height: 56 mm

Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	CFC-08-M	CFC-08-C
08 - 12	CFC-12-M	CFC-12-C
12 - 16	CFC-16-M	CFC-16-C
16 - 20	CFC-20-M	CFC-20-C
20 - 24	CFC-24-M	CFC-24-C

Chainfix Clip - Modular snap-on strain relief device for C-profile

Available for all igus® E-ChainSystems® with C-profiles and also suitable for assembly in the KMA mounting brackets and clip-on strain relief for crossbars. High pull forces, plug-in modular snap-on strain relief device. **Details ▶ chapter 10**



Part No.	ø max. conduit [mm]	Width [mm]
CFN.20	20	10,8
CFN.30.52	30	16,8
CFN.20.N35	20	20,0

Chainfix Nugget for the C-Profile

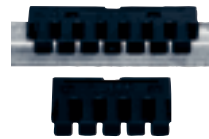
Strain relief for the fixation of cables up to a diameter of Ø 30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-harnessed cable strap, very small space requirement. **Details ▶ chapter 10**



Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

Chainfix tiwrap plates with clip-on connection for the C-profile

Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all E-Chains® with KMA and integrated C-profile. **Details ▶ chapter 10**

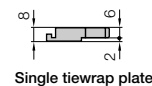
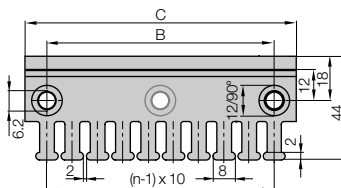


Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(- = no / + = yes)

Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ▶ chapter 10**



Single tiewrap plate

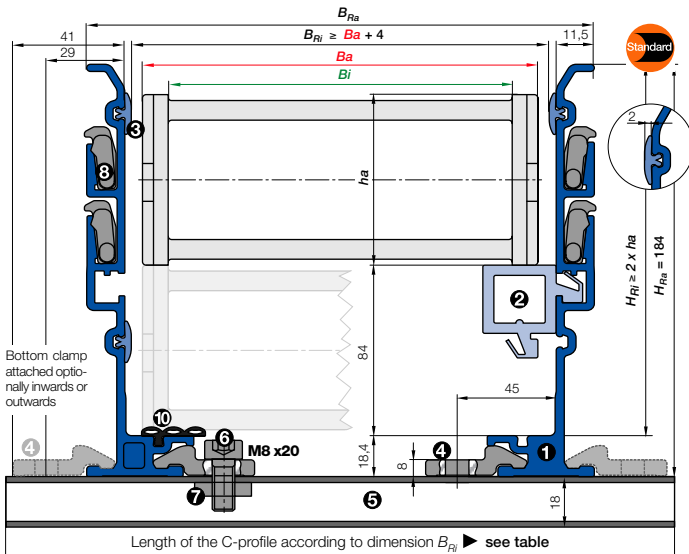
Shown assembled

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▶ page 7.223

- Ba** = Outer width E-Chains® / E-Tube
 - Bi** = Inner width E-Chains® / E-Tube
 - ha** = Outer height E-Chains® / E-Tube
 - H_{Ri}** = Inner trough height
 - H_{Ra}** = Outer trough height
 - B_{Ri}** = Inner trough width ► depends on dim. **Ba**
 - B_{Ra}** = Outer trough width
 - n_{Mon}** = Number of installation sets (left/right)
 - n_{Ri}** = Number of troughs sets (left/right)
- $H_{Ri} \geq 2 \cdot ha$
 $B_{Ri} \geq Ba + 4$
- = Guide trough set ● = Glide bar
 - = Installation set "Basic" ● = C-profile



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Installation set "Basic" with C-profile

Bottom Clamp attached optionally inwards or outwards

4040.05.200.0 ► Order example

B _{Ri} [mm]	Part No.	
	attached inwards	attached outwards
.05	90	960.50.225
.06	105	960.50.225
.07	115	960.50.250
.08	127	960.50.175
.10	140	960.50.200
.11	153	960.50.200
.12	165	960.50.225
.13	178	960.50.225
.15	190	960.50.250
.16	203	960.50.250
.17	215	960.50.275
.18	228	960.50.275
.20	240	960.50.300
.21	253	960.50.300
.22	265	960.50.325
.23	278	960.50.325
.25	290	960.50.350
.26	303	960.50.350
.27	315	960.50.375
.28	328	960.50.375
.30	340	960.50.400
.31	353	960.50.400
.32	365	960.50.425
.33	378	960.50.425
.35	390	960.50.450
.36	403	960.50.450
.37	415	960.50.475
.38	428	960.50.475
.40	440	960.50.500
.41	453	960.50.500
.42	465	960.50.525
.43	478	960.50.525
.45	490	960.50.550
.46	503	960.50.550
.47	515	960.50.575
.48	528	960.50.575
.50	540	960.50.600
.51	553	960.50.600
.52	565	960.50.625
.53	578	960.50.625
.55	590	960.50.650
.60	640	960.50.775

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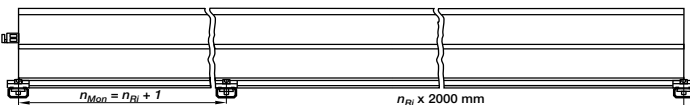
Internet: www.igus.eu
E-mail: info@igus.de

- **Components, trough "Basic":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Basic":** ④ Bottom clamp, aluminum ⑤ C-profile, steel galvanized ⑥ Screw M8 x20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic



Order example: Length of travel 30 m - Center mounted for Series 4040.10.200.0 with B_{Ri} = 140

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. **974.30.SL**
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. **974.31.SL**
- Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets "Basic" Part No. **960.50.200**
- Module for the fixed end
Order text: 1 set Part No. **974.80**
- Option:** For an additional noise dampening with silencer profile, please add Index A - Example: Part No. **974.30.SLA**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

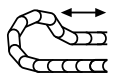


A quick fix for mounting the stationary end of an E-Chain®
With this module for the fixed end, fast and easy mounting onto the Aluminum "SuperTrough" is now possible without any drilling. Fast mounting of the E-Chain® by clamping onto the aluminum trough
● Quick relocation of the stationary end ● No drilling necessary ► page 9.16

Price index



Series 4040HD Series R8840HD



"Heavy-Duty" version
for long travel applications



Very high torsional rigidity
and and tensile force



ESD classification:
Electrically conductive ESD/ATEX
version upon request



Opening e-chains®: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (e-tubes) - Insert screwdriver into the slot, release by lever action



When to use the Series 4040HD/R8840HD:

- For high (tensile)-charges at long travel applications
- When high torsional forces are expected
- For long-term operation in very moist environments
- Also available as rol e-chain®



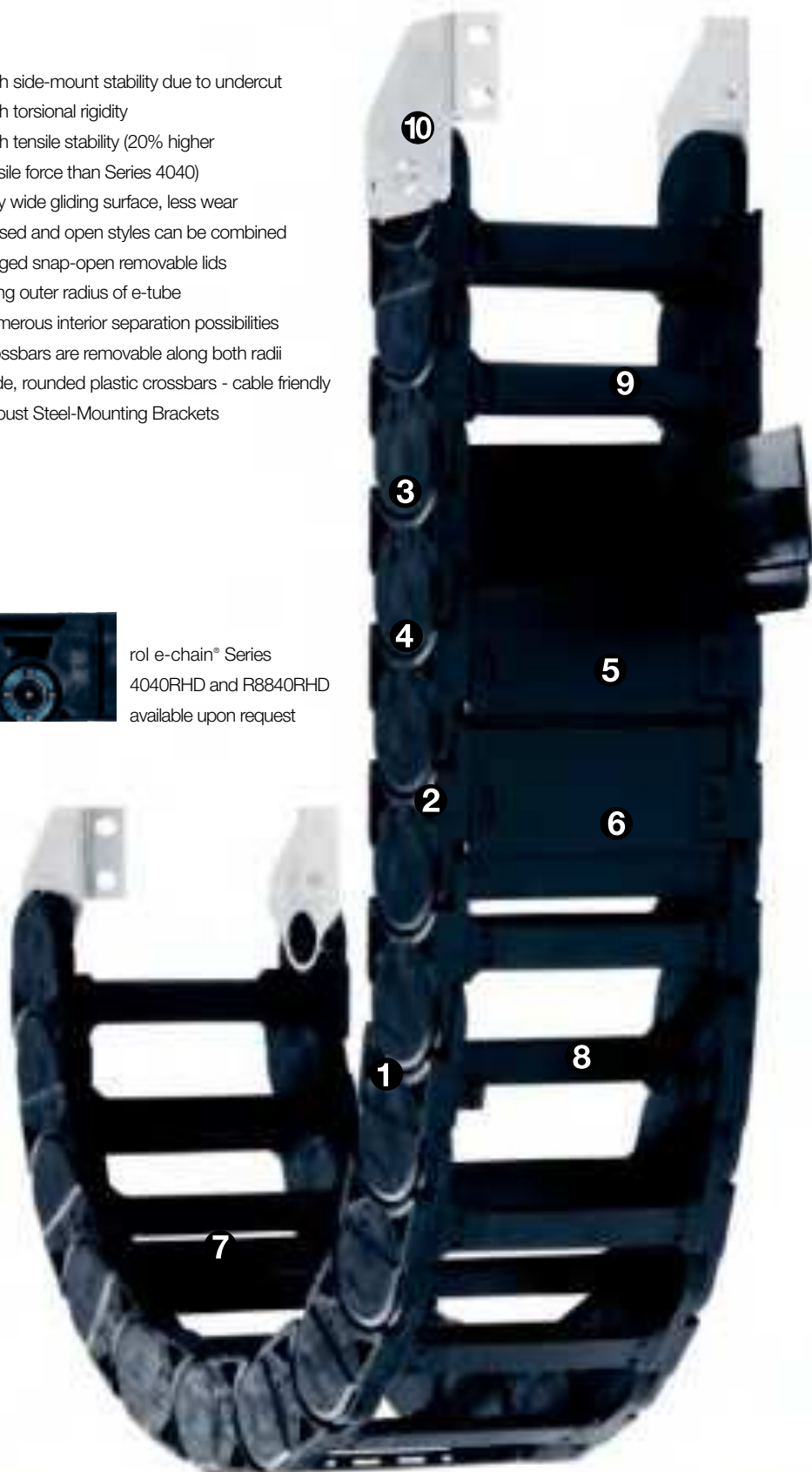
When not to use them:

- If a quieter version is required
 - ▶ Series E4.56, page 7.78
- If a simple and low-cost solution is required
 - ▶ Series 14040/R18840, page 7.164

- 1 High side-mount stability due to undercut
- 2 High torsional rigidity
- 3 High tensile stability (20% higher tensile force than Series 4040)
- 4 Very wide gliding surface, less wear
- 5 Closed and open styles can be combined
- 6 Hinged snap-open removable lids along outer radius of e-tube
- 7 Numerous interior separation possibilities
- 8 Crossbars are removable along both radii
- 9 Wide, rounded plastic crossbars - cable friendly
- 10 Robust Steel-Mounting Brackets



rol e-chain® Series 4040RHD and R8840RHD available upon request



Order example complete e-chain®

Please indicate chain-lengths or number of links Example: 5 m or 55 links

5 m 4040HD.30.300.0

e-chain®

with 2 separators 411 assembled every 2nd link

Interior separation

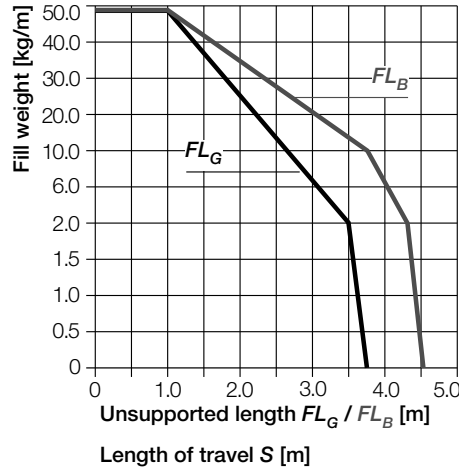
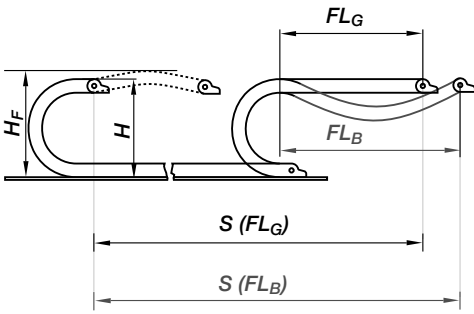
1 set 4040HD.12.E

Mounting bracket

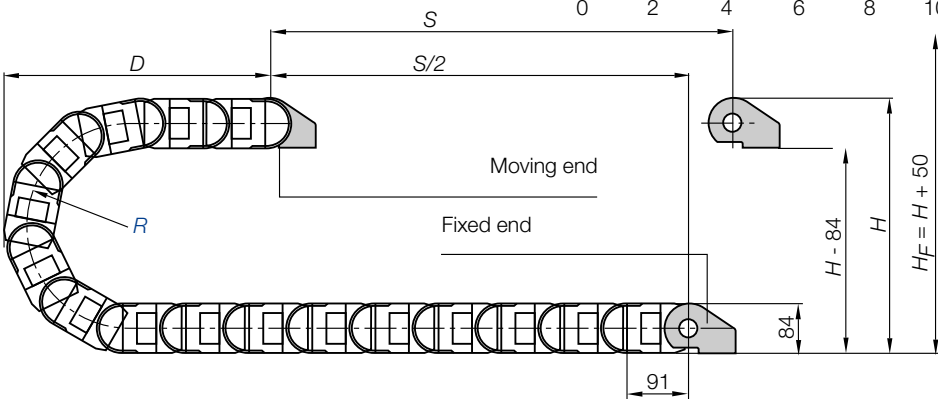


Unsupported length

FL_G = with straight upper run
 FL_B = with permitted sag
 Further information ► **Design, page 1.12**



- S = Length of travel
 - R = Bending radius
 - H = Nominal clearance height
 - H_F = Required clearance height
 - H_{RI} = Trough inner height
 - D = Overlength e-chain*
radius in final position
 - $K = \pi \cdot R + \text{"safety"}$
 - D_2 = Over length - long travels, gliding
 - K_2 = *Further add-on
 - H_2 = *Mounting height
- *if the mounting bracket location is set lower



Pitch = 91 mm/Glied Links/m = 11 (1001 mm) Chain length = $S/2 + K$

R	135	150	200**	250	300	350**	400**
H	354	384	484	584	684	784	884
D	240	255	305	355	405	455	505
K	425	475	630	790	945	1100	1260
H ₂	266	266	266	266	266	266	266
D ₂	390	450	710	920	1180	1440	1530
K ₂	728	819	1274	1638	2002	2366	2548

**NEW in this catalog

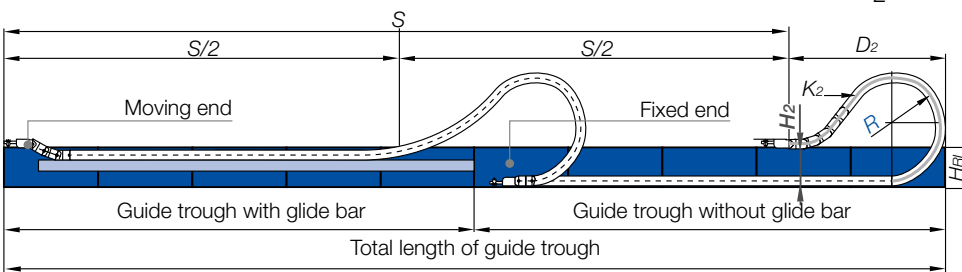


Short travels - unsupported

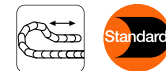
Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus® if space is particularly restricted.

The required clearance height:
 $H_F = H + 50 \text{ mm}$
 (with 3,0 kg/m fill weight)

Long travel lengths from 10 m to max. 350 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 350 m)

In this case the e-chain® upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



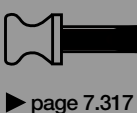
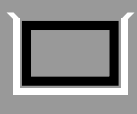
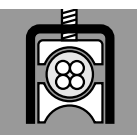
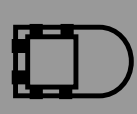
Details of material properties

► page 1.38

56

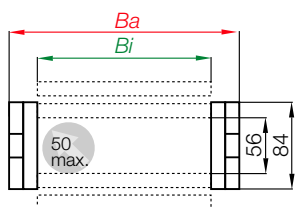
System E4/4
Inner height: 56 mm

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► page 7.317

igus® e-chainsystems®

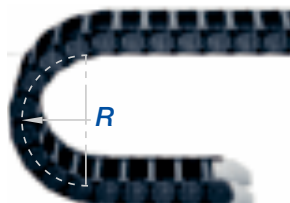


Part No. structure

4040HD.	30.	250.	0
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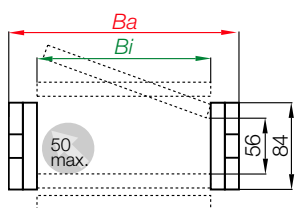
Series 4040HD - e-chain® with crossbars every link



- Crossbars every link
- For highest additional loads
- For applications particularly demanding
- Can be opened from two sides



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Fax +49- (0) 22 03-96 49-222



Part No. structure

8840HD.	30.	250.	0
---------	-----	------	---



Series R8840HD - Fully enclosed e-tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable



igus® GmbH
51147 Cologne

Internet: www.igus.eu
E-mail: info@igus.de

Rolling instead of gliding: rol e-chain®

Special solution for long travels. 75% less drive power (gliding application) with igus® rol e-chain®.
Series 4040R - Order example 4040RHD.30.250.0

Further information: www.igus.de/en/role
or phone: +49-(0) 22 03-96 49-800



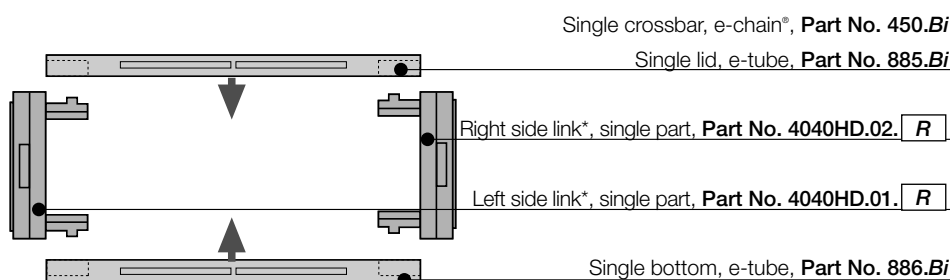
Part No.		<i>Bi</i>	<i>Ba</i>	4040HD R8840HD	
		[mm]	[mm]	[kg/m]	[kg/m]
4040HD.05.....	<input type="checkbox"/> .0	50	104	≈ 5,03	-
4040HD.06.....	<input type="checkbox"/> .0	65	119	≈ 5,12	-
4040HD/8840HD.07.	<input type="checkbox"/> .0*	75	129	≈ 5,19	≈ 5,64
4040HD.08.....	<input type="checkbox"/> .0	87	141	≈ 5,27	-
4040HD/8840HD.10.	<input type="checkbox"/> .0	100	154	≈ 5,36	≈ 5,93
4040HD.11.....	<input type="checkbox"/> .0	112	166	≈ 5,48	-
4040HD/8840HD.12.	<input type="checkbox"/> .0	125	179	≈ 5,56	≈ 6,29
4040HD.13.....	<input type="checkbox"/> .0	137	191	≈ 5,69	-
4040HD/8840HD.15.	<input type="checkbox"/> .0	150	204	≈ 5,73	≈ 6,67
4040HD.16.....	<input type="checkbox"/> .0	162	216	≈ 5,84	-
4040HD/8840HD.17.	<input type="checkbox"/> .0	175	229	≈ 5,97	≈ 6,98
4040HD.18.....	<input type="checkbox"/> .0	187	241	≈ 6,09	-
4040HD/8840HD.20.	<input type="checkbox"/> .0	200	254	≈ 6,14	≈ 7,29
4040HD.21.....	<input type="checkbox"/> .0	212	266	≈ 6,21	-
4040HD.22.....	<input type="checkbox"/> .0	225	279	≈ 6,28	-
4040HD.23.....	<input type="checkbox"/> .0	237	291	≈ 6,39	-
4040HD/8840HD.25.	<input type="checkbox"/> .0	250	304	≈ 6,50	≈ 8,02
4040HD.26.....	<input type="checkbox"/> .0	262	316	≈ 6,59	-
4040HD/8840HD.27.	<input type="checkbox"/> .0	275	329	≈ 6,70	≈ 8,38
4040HD.28.....	<input type="checkbox"/> .0	287	341	≈ 6,75	-
4040HD/8840HD.30.	<input type="checkbox"/> .0	300	354	≈ 6,91	≈ 8,68
4040HD.31.....	<input type="checkbox"/> .0	312	366	≈ 6,94	-
4040HD.32.....	<input type="checkbox"/> .0	325	379	≈ 7,05	-
4040HD.33.....	<input type="checkbox"/> .0	337	391	≈ 7,17	-
4040HD/8840HD.35.	<input type="checkbox"/> .0	350	404	≈ 7,37	≈ 9,38
4040HD.36.....	<input type="checkbox"/> .0	362	416	≈ 7,28	-
4040HD.37.....	<input type="checkbox"/> .0	375	429	≈ 7,38	-
4040HD.38.....	<input type="checkbox"/> .0	387	441	≈ 7,49	-
4040HD/8840HD.40.	<input type="checkbox"/> .0	400	454	≈ 7,76	≈ 10,38
4040HD.41.....	<input type="checkbox"/> .0	412	466	≈ 7,68	-
4040HD.42.....	<input type="checkbox"/> .0	425	479	≈ 7,98	-
4040HD.43.....	<input type="checkbox"/> .0	437	491	≈ 7,82	-
4040HD.45.....	<input type="checkbox"/> .0	450	504	≈ 8,15	-
4040HD/8840HD.46.	<input type="checkbox"/> .0	462	516	≈ 8,10	≈ 10,85
4040HD.47.....	<input type="checkbox"/> .0	475	529	≈ 8,14	-
4040HD.48.....	<input type="checkbox"/> .0	487	541	≈ 8,39	-
4040HD.50.....	<input type="checkbox"/> .0	500	554	≈ 8,48	-
4040HD.51.....	<input type="checkbox"/> .0	512	566	≈ 8,40	-
4040HD.52.....	<input type="checkbox"/> .0	525	579	≈ 8,57	-
4040HD.53.....	<input type="checkbox"/> .0	537	591	≈ 8,66	-
4040HD.55.....	<input type="checkbox"/> .0	550	604	≈ 9,08	-
4040HD.60.....	<input type="checkbox"/> .0	600	654	≈ 9,31	-

Available bending radii

R [mm] 135** 150 200 250 300 350 400

Supplement Part No. with required radius. Example: 4040HD.30.300.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 91 mm/link - Links/m = 11



Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order example:

Full e-tube made of HT*:
8840HD.40.150.0.HT
 Lids made of HT:
8840HD.40.HTE.150.0

*for long travels upon request

Further Information:
www.igus.de/en/HT

Delivery time
 up to 4 weeks!



* Removable lid only,
 no hinged option

** not available for R8840HD



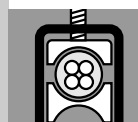
Extender crossbar for large diameter hoses ▶ page 7.342

Part No. e-chain® - links, single parts

*View from the fixed point of the e-chain®/e-tube

System E4/4
 Inner height: 56 mm

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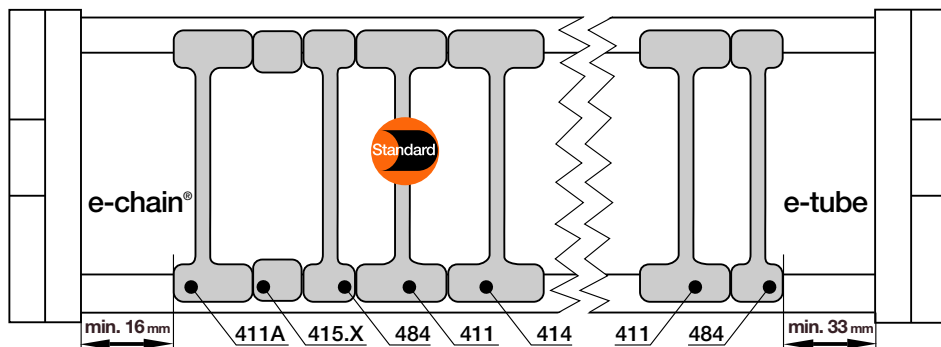


▶ page 7.317

igus® e-chainsystems®



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 33 mm (e-tube) and 16 mm (e-chain)!



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Vertical separator 401



Vertical separator 483



Spacer 405.XX



Locking separator 404



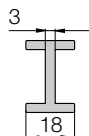
Vertical separator 406



Asymmetric separator 401A

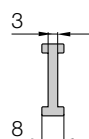
Vertical separator for e-chains®/e-tubes

unassembled	401
assembled	411



Vertical separator for e-chains®/e-tubes

unassembled	483
assembled	484



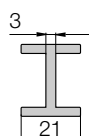
Spacer* for e-chains®

unassembled	405.XX
assembled	415.XX



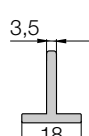
Locking separator for e-chains®

unassembled	404
assembled	414



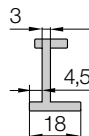
Vertical separator for e-tubes

unassembled	406
assembled	416



Asymmetric separator for e-chains®

unassembled	401A
assembled	411A



*For side-mounted applications

Option 1: Vertical separators and spacers

● **Standard separator 401 for e-chains®/e-tubes** offers safe stability due to its broad foot design, also when used with thick cables or hoses.

● **Vertical separator 483 with a narrow foot for e-chains® and e-tubes** with applications where a large number of small cables need to be individually separated.

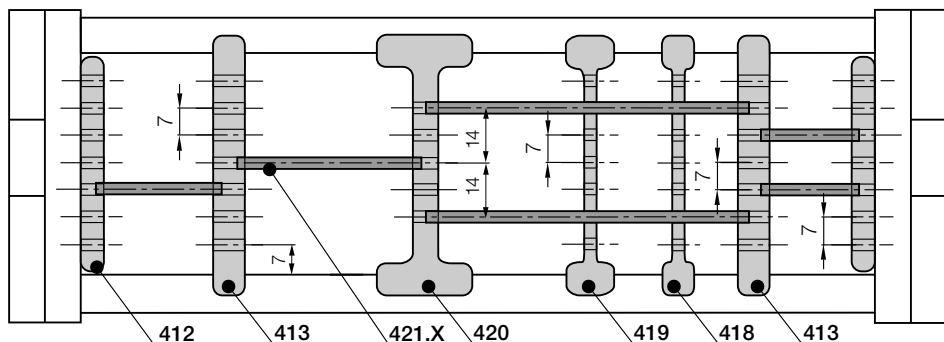
● Separators (e.g. "side mounted") for e-chains® can be fixed in their position with **Spacers 405.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15, 20, 30 and 40 mm)

Additionally:

● **Locking separator for e-chains® 404** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment

● **Locking separator 406 for E4-Tubes** - safe fitting locked on lid or bottom of the Tube and sideways slideable. The opposing lid or bottom can easily be opened and closed. Especially capable if many separators need to be assembled on a tight inner width

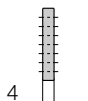
● **Asymmetric separator 401A for e-chains®** with an 18-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.



For use with many cables of differing diameters. e-chains® and e-tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

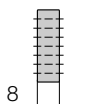
Option 2: Shelves

● Side plates 402, middle plates 403 and shelves 420.X form the basic pattern of a shelf system. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments).



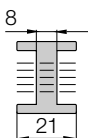
Side plate for e-chains®/e-tubes		
unassembled		402
assembled		412

● Locking vertical separator 410, slotted combined with shelves (only for e-chains®).



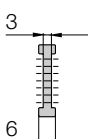
Middle plate for e-chains®/e-tubes		
unassembled		403
assembled		413

● Slotted separators 408 are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

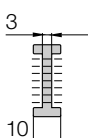


Locking vertical separator for e-chains®		
unassembled		410
assembled		420

● The unilateral open slotted separator 409 can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



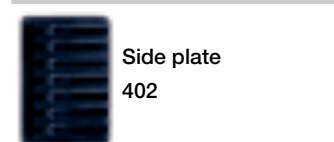
Slotted separator for e-chains®/e-tubes		
unassembled		408
assembled		418



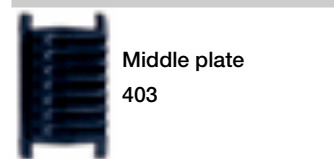
Open slotted separator for e-chains®/e-tubes		
unassembled		409
assembled		419

Width X [mm]	Part No. unassembled	Part No. assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28
033	420.33	421.33
043	420.43	421.43
050	420.50	421.50
062	420.62	421.62

Width X [mm]	Part No. unassembled	Part No. assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200



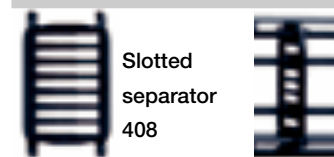
Side plate 402



Middle plate 403



Locking vertical separator 410



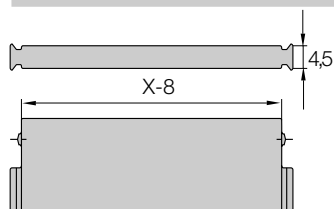
Slotted separator 408



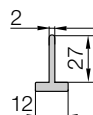
Open slotted separator 409



Shelf 420.X

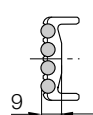


Additional elements for interior separation



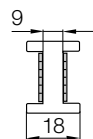
Center crossbar		
unassembled		405
assembled		415

Center crossbar - was developed for applications with a large number of thin cables. The center crossbar offers the option of subdividing the e-chain® independently into upper and lower halves.



Rollclip		
unassembled		489.27
assembled		490.27

Rollclip - minimizes abrasion of particularly sensitive hoses. The Rollclip is simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the chain and hose.

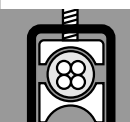


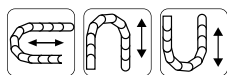
Roller separator		
unassembled		429
assembled		430

Roller separator - performs a similar function to the Rollclip, but doubles as a separator.

System E4/4
Inner height: 56 mm

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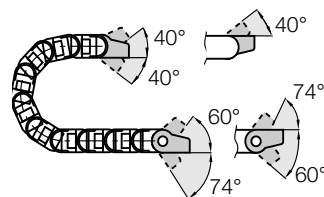




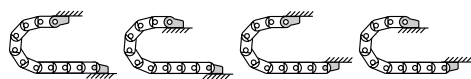
Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
40400HD.1.E



Fixed end
40400HD.2.E



Possible installation conditions -

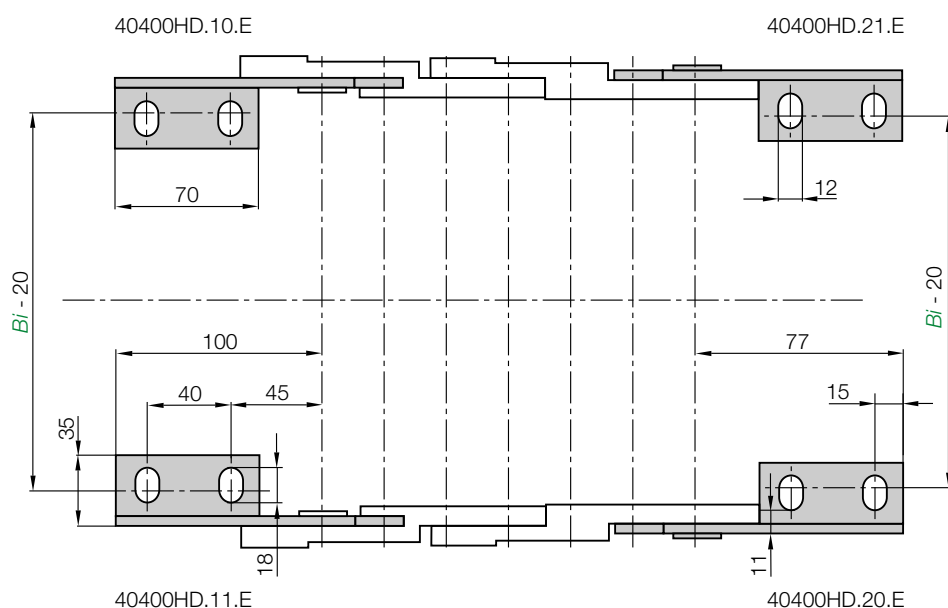
Further installation angles ► installation sketch

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Fax +49- (0) 22 03-96 49-222

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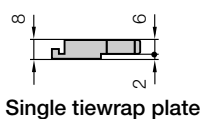
Moving end
40400HD.1.E

Fixed end
40400HD.2.E

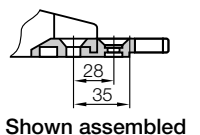


Part No.	Mounting bracket
40400HD.12.E	Full set, 4 parts, 2 with pin / 2 with bore
40400HD.1.E	Mounting bracket moving end , 1 part left / right
40400HD.2.E	Mounting bracket fixed end , 1 part left / right

E4/4 | Series 4040HD-R8840HD | Accessories | Strain Relief



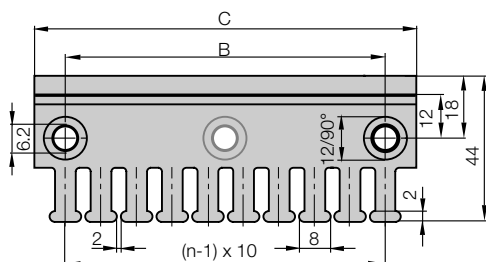
Single tie-wrap plate



Shown assembled

Tie-wrap plate as individual part

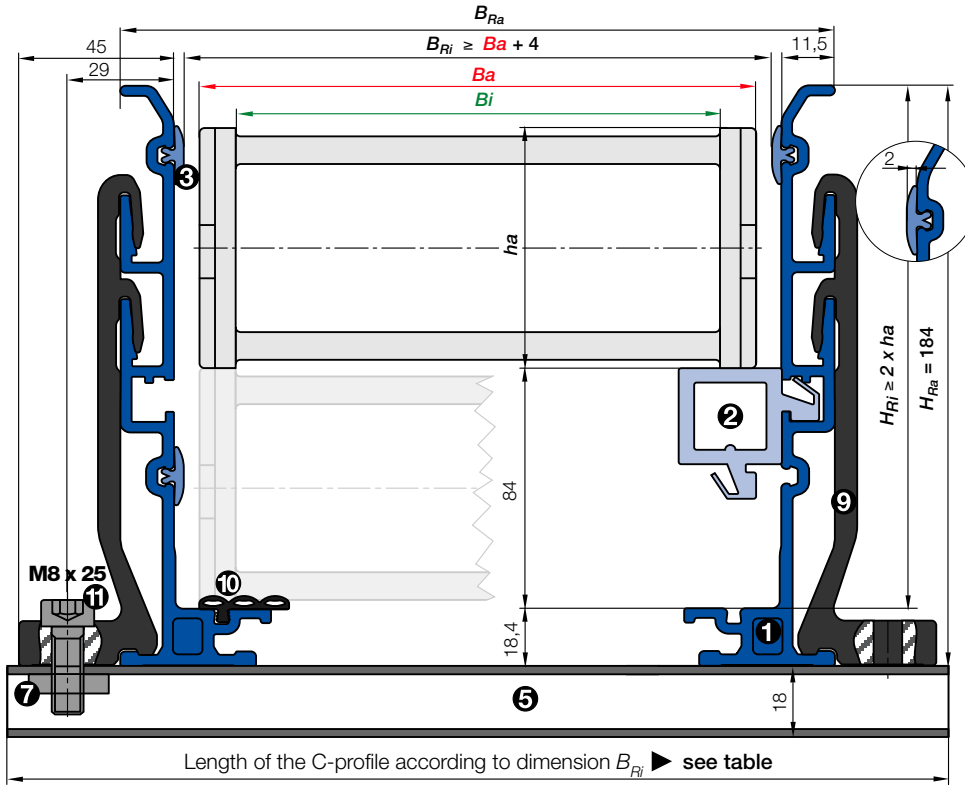
As individual component screwed on KMA. Can be plugged in the mounting brackets. **Details ► chapter 10**



Tie-wrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(- = no / + = yes)

Internet: www.igus.eu
E-mail: info@igus.de



- B_a = Outer width e-chains® / e-tube
- B_i = Inner width e-chains® / e-tube
- h_a = Outer height e-chains® / e-tube
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- B_{Ri} = Inner trough width ▶ depends on dim. B_a
- B_{Ra} = Outer trough width
- n_{Mon} = Number of installation sets (left/right)
- n_{Ri} = Number of trough sets (left/right)
- ! $H_{Ri} \geq 2 \cdot h_a$
- ! $B_{Ri} \geq B_a + 4$
- = Guide trough set ● = Glide bar
- = Installation set "Basic" ● = C-profile

Installation set Heavy-Duty with C-profile

4040HD.05.250.0 ▶ Order example

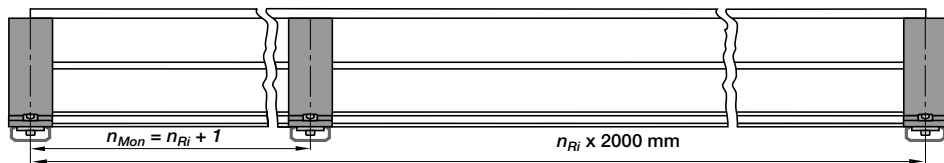
B_{Ri} [mm]	Part No. assembled
.05	108 974.50.225
.06	123 974.50.250
.07	133 974.50.250
.08	145 974.50.275
.10	158 974.50.275
.11	170 974.50.300
.12	183 974.50.300
.13	195 974.50.325
.15	208 974.50.325
.16	220 974.50.350
.17	233 974.50.350
.18	245 974.50.375
.20	258 974.50.375
.21	270 974.50.400
.22	283 974.50.400
.23	295 974.50.425
.25	308 974.50.425
.26	320 974.50.450
.27	333 974.50.450
.28	345 974.50.475
.30	358 974.50.475
.31	370 974.50.500
.32	383 974.50.500
.33	395 974.50.525
.35	408 974.50.525
.36	420 974.50.550
.37	433 974.50.550
.38	445 974.50.575
.40	458 974.50.575
.41	470 974.50.600
.42	483 974.50.600
.43	495 974.50.625
.45	508 974.50.625
.46	520 974.50.650
.47	533 974.50.650
.48	545 974.50.675
.50.^	558 974.50.675
.51	570 974.50.700
.52	583 974.50.700
.53	595 974.50.725
.55	608 974.50.725
.60	658 974.50.775



- **Components, trough "Heavy Duty":** ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- **Components, installation set "Heavy Duty":** ⑤ C-profile, steel galvanized ⑦ Sliding nut M8 ⑨ Installation angle bracket "Heavy Duty", Aluminium ⑪ Screw M8 x 25

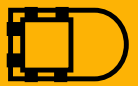
Order example: Length of travel 30 m - Center mounted for Series 4040HD.10.250.0 with $B_{Ri} = 158$

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. 974.30.SL
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. 974.31.SL
- Installation set "Heavy Duty" complete (guide trough-sets + 1)
Order text: 17 installation sets "Heavy Duty" Part No. 974.50.275
- Option:** For an additional noise dampening with silencer profile, please add Index A - Example: **Part No. 974.30.SLA**



Principle sketch: Number of installation sets to be installed = **Number of trough sections + 1**

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▶ Chapter 10



▶ Chapter 9



▶ page 7.317

Price index



Series 5050

Series 5150

Series R9850



Side-mounted -
unsupported



ESD classification:
Electrically conductive ESD/ATEX
version upon request



High torsional
rigidity



Opening E-Chains: Remove crossbars and clips - Insert screwdriver into the slot, push down, release by lever action



Remove lids/bottoms (E-Tubes) - Insert screwdriver into the slot, release by lever action



When to use the Series 5050/5150/R9850:

- When high torsional forces are expected
- For side-mounted applications involving large unsupported lengths
- Due to very dirt and dusty environment
- Also available as Rol E-Chain*



When not to use it:

- When very long travels or high additional loads are involved
▶ Series 5050HD, page 7.268
- If a simple and low-cost solution is required
▶ Series 15050/R19850, page 7.144

- 1 High side-mount stability due to undercut
- 2 High torsional rigidity
- 3 Closed and open styles can be combined
- 4 Hinged snap-open removable lids of E-Tube
- 5 Numerous interior separation possibilities
- 6 Crossbars on E-Chains* are removable along both radii
- 7 Lateral glide surfaces for side-mounted operation
- 8 Wide, rounded plastic crossbars - cable friendly
- 9 KMA mounting brackets with attachment points on all sides
- 10 Mounting brackets with integrated strain relief available, locking or pivoting
- 11 E-Chains* also available with reverse bending radius "RBR"

! "Heavy-Duty" size available. Greater unsupported length for higher loads and travels.
Also available as Rol E-Chain* version



Rol E-Chain* Series
5050R/9850R available
upon request



Order example complete E-Chain*

Please indicate chain-lengths or number of links Example: 5 m or 55 links

5 m 5050.30.300.0



E-Chain*

with 2 separators 511 assembled every 2nd link



Interior separation

1 set 50500.30.12C



Mounting bracket

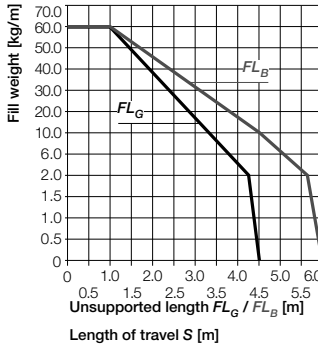
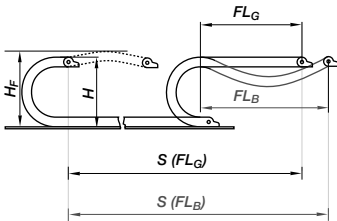


Unsupported length

FL_G = with straight upper run

FL_B = with permitted sag

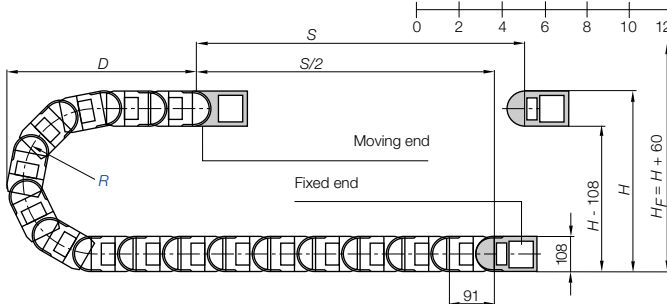
Further information ► **Design, page 1.12**



- S = Length of travel
 - R = Bending radius
 - H = Nominal clearance height
 - H_F = Required clearance height
 - H_{R1} = Trough inner height
 - D = Overlength E-Chain" radius in final position
 - $K = \pi \cdot R + \text{"safety"}$
 - D_2 = Over length - long travels, gliding
 - K_2 = "Further add-on
 - H_2 = "Mounting height
- *if the mounting bracket location is set lower

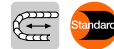
Other installation methods

- Vertical, hanging ≤ 120 m
- Vertical, standing ≤ 6 m
- Side mounted, un supp. ≤ 3 m
- Rotary requires further calculation
- Unsupported length of upper run = upon request



Pitch = 91 mm/link Links/m = 11 (1001 mm) Chain length = $S/2 + K$

R	150	200	250	300	350	400	500	550	600	650	1000
H_{25}	408	508	608	708	808	908	1108	1208	1308	1408	2108
D	295	345	395	445	495	545	645	695	745	795	1145
K	655	815	970	1125	1285	1440	1755	1910	2070	2225	3255
H_2	242	242	242	242	242	242	242	242	242	-	-
D_{25}	550	800	950	1200	1550	1700	2175	2355	2580	-	-
K_2	910	1274	1638	2002	2457	2730	3458	3640	4459	-	-

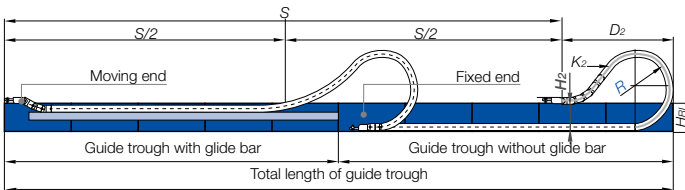


Short travels - unsupported

Unsupported E-Chains" feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F . Please consult igus" if space is particularly restricted.

The required clearance height:
 $H_F = H + 60$ mm
(with 3,0 kg/m fill weight)

Long travel lengths from 10 m to max. 400 m Chain length = $S/2 + K_2$



In case of travels between 4 and 10 m we recommend a longer unsupported length.



Gliding, long travel applications (max. 400 m)

In this case the E-Chain" upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians.

Technical Data

Speed / acceleration FL_G	max. 20 [m/s] / max. 200 [m/s ²]
Speed / acceleration FL_B	max. 3 [m/s] / max. 6 [m/s ²]
Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s ²]
Material - permitted temperature °C	igumid G / -40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB



Details of material properties
► **page 1.38**

80

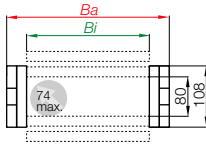
System E4/4
Inner height: 80 mm

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► **page 7.223**

For support of the lower run - Support Tray tool kit available ► page 9.70

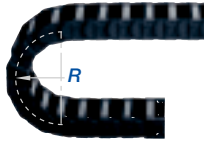


Part No. structure

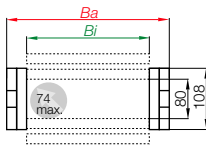
5050. 30. 300. 0



Series 5050 - E-Chain® with crossbars every link



- Crossbars every link
- For rigid hydraulic hoses
- For applications particularly demanding
- Can be opened from two sides

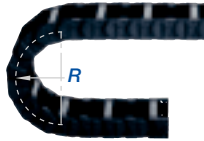


Part No. structure

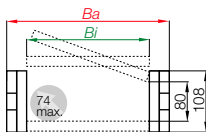
5150. 30. 300. 0



Series 5150 - E-Chain® with crossbars every 2nd link



- Crossbars every 2nd link = Standard
- For nearly every situation
- Can be opened from two sides
- Easy assembly
- Stable
- Attractive price

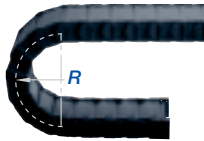


Part No. structure

9850. 30. 300. 0



Series R9850 - Fully enclosed E-Tube



- Fully enclosed
- Excellent cable protection against dirt
- Protection against hot chips (up to 900°C)
- Lids along the entire inner radius are completely removable. Lids along the entire outer radius are single sided snap-open with a hinge on the other side to keep them attached to the chain or completely removable.



Rol instead of gliding: Rol E-Chain®

Special solution for long travels. 75% less drive power (gliding application) with igus® Rol E-Chain®.
Series 5050R and 9850R - Order example 5050R.30.300.0
Further information: www.igus.de/en/role
or phone: +49-0 22 03-96 49-800



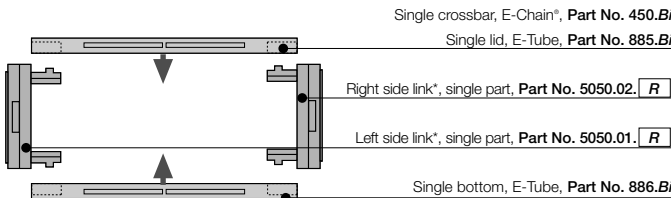
Part No.	<i>Bi</i>	<i>Ba</i>	5050	5150	R9850
	[mm]	[mm]	[kg/m]	[kg/m]	[kg/m]
5050/5150.05.....	50	100	≈ 5,63	≈ 5,62	-
5050/5150.06.....	65	115	≈ 5,70	≈ 5,68	-
5050/5150/9850.07.....	75	125	≈ 5,79	≈ 5,70	≈ 6,24
5050/5150.08.....	87	137	≈ 5,89	≈ 5,76	-
5050/5150/9850.10.....	100	150	≈ 5,96	≈ 5,79	≈ 6,52
5050/5150.11.....	112	163	≈ 6,09	≈ 5,85	-
5050/5150/9850.12.....	125	175	≈ 6,16	≈ 5,89	≈ 6,89
5050/5150.13.....	137	188	≈ 6,29	≈ 5,95	-
5050/5150/9850.15.....	150	200	≈ 6,36	≈ 5,98	≈ 7,32
5050/5150.16.....	162	213	≈ 6,47	≈ 6,04	-
5050/5150.17.....	175	225	≈ 6,58	≈ 6,09	-
5050/5150.18.....	187	238	≈ 6,69	≈ 6,15	-
5050/5150/9850.20.....	200	250	≈ 6,71	≈ 6,16	≈ 7,89
5050/5150.21.....	212	263	≈ 6,82	≈ 6,22	-
5050/5150.22.....	225	275	≈ 6,89	≈ 6,25	-
5050/5150.23.....	237	288	≈ 7,02	≈ 6,31	-
5050/5150/9850.25.....	250	300	≈ 7,11	≈ 6,36	≈ 8,61
5050/5150.26.....	262	313	≈ 7,19	≈ 6,40	-
5050/5150/9850.27.....	275	325	≈ 7,30	≈ 6,46	≈ 8,82
5050/5150.28.....	287	338	≈ 7,33	≈ 6,47	-
5050/5150/9850.30.....	300	350	≈ 7,55	≈ 6,58	≈ 9,27
5050/5150.31.....	312	363	≈ 7,58	≈ 6,60	-
5050/5150.32.....	325	375	≈ 7,63	≈ 6,62	-
5050/5150.33.....	337	388	≈ 7,81	≈ 6,71	-
5050/5150/9850.35.....	350	400	≈ 7,96	≈ 6,79	≈ 10,02
5050/5150.36.....	362	413	≈ 7,97	≈ 6,80	-
5050/5150.37.....	375	425	≈ 7,99	≈ 6,80	-
5050/5150.38.....	387	438	≈ 8,07	≈ 6,84	-
5050/5150/9850.40.....	400	450	≈ 8,27	≈ 6,94	≈ 10,98
5050/5150.41.....	412	463	≈ 8,43	≈ 7,02	-
5050/5150.42.....	425	475	≈ 8,58	≈ 7,10	-
5050/5150.43.....	437	488	≈ 8,65	≈ 7,13	-
5050/5150.45.....	450	500	≈ 8,71	≈ 7,16	-
5050/5150/9850.46.....	462	513	≈ 8,73	≈ 7,17	≈ 11,44
5050/5150.47.....	475	525	≈ 8,87	≈ 7,24	-
5050/5150.48.....	487	538	≈ 8,88	≈ 7,26	-
5050/5150.50.....	500	550	≈ 9,00	≈ 7,30	-
5050/5150.51.....	512	563	≈ 9,02	≈ 7,32	-
5050/5150.52.....	525	575	≈ 9,06	≈ 7,34	-
5050/5150.53.....	537	588	≈ 9,22	≈ 7,41	-
5050/5150.55.....	550	600	≈ 9,70	≈ 7,66	-
5050/5150.60.....	600	650	≈ 9,90	≈ 7,76	-

Available bending radii

R [mm] 150* 200 250 300 350 400 500 550 600 650 1000

Supplement Part No. with required radius. Example: 5050.30.300.0

0 = standard color, other colors ▶ page 1.39 · Pitch = 91 mm/link · Links/m = 11



Hot Chips up to 850°C

E-Tubes that repel hot chips, up to 850°C. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® "igumid HT" material. Order excuse!

Full E-Tube made of HT:
9850.40.250.0.HT
Lids made of HT:
9850.40.HTE.250.0

*for long travels. Upon request
Further information:
www.igus.de/en/HT
Delivery time
up to 4 weeks!

Extreme Glider..

...with up to 70% larger glide surface. For high additional loads and high gliding speeds. Gliding applications without additional elements as well as 150% more wear allowance and improvement of service life by factor 4!

Order example:
5050.35G.250.0
5050.45G.250.0
Further information:
phone +49-0 22 03-96 49-800



*not available for R9850



Extender crossbar for large diameter hoses ▶ page 7.274

Part No. E-Chain® - links, single parts

*View from the fixed point of the E-Chain®/E-Tube

System E4/4
Inner height: 80 mm

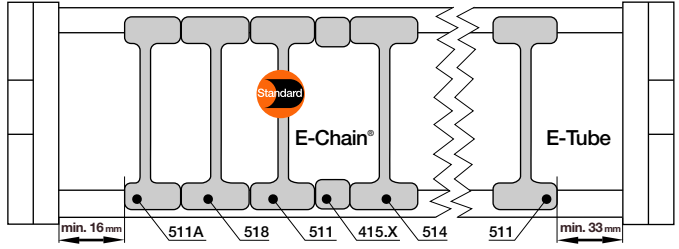
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▶ page 7.223



Vertical separators are used if a vertical subdivision is required. In the standard configuration, a separator is mounted at every second link. **Note:** Observe a lateral spacing of at least 33 mm (E-Tube) and 16 mm (E-Chain)!



Vertical separator
501

Vertical separator for E-Chains*	
unassembled	501
assembled	511



Option 1: Vertical separators and spacers

● **Standard separator 501 for E-Chains®** offers safe stability due to its broad foot design, also when used with thick cables or hoses.



Spacer
405.XX

Spacer*	
for E-Chains*	
unassembled	405.XX
assembled	415.XX



● Separators (e.g. "side mounted") for E-Chains® can be fixed in their position with **spacers 405.XX**. The available inner height will be reduced by 2 mm, per spacer and side. To avoid this, the parts can be assembled on outside of the crossbar (not for long travels) **XX = width of the spacer** (available 10, 15, 20, 30 and 40 mm)



Locking separator
504

Locking separator for E-Chains*	
unassembled	504
assembled	514



Additionally:

● **Locking separator for E-Chains® 504-** with increased retention force for applications exposed to very high humidity or extreme loads. If locking separators are used, the E-Chain® is more difficult to open



Locking separator
508

Locking separator for E-Chains*	
unassembled	508
assembled	518



● The **locking separator for E-Chains® 508** is designed for applications exposed to extremely high humidity, for example, at composting plants. The lateral cam serves for uniform alignment of the vertical separators; if these separators are misaligned, they will inevitably get damaged on an attempt to open the E-Chain®.



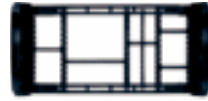
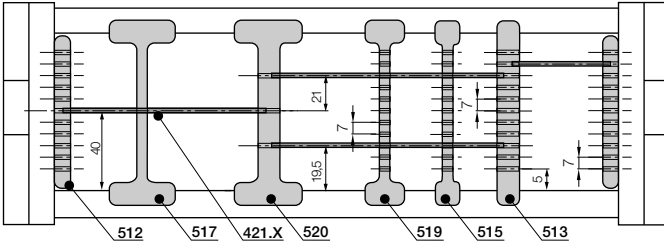
Asymmetric
separator 501A

Asymmetric separator for E-Chains*	
unassembled	501A
assembled	511A



*For side-mounted applications

● **Asymmetric separator 501A for E-Chains®** (not for E-Tubes) with an 18-mm base, for combinations between spacers of different widths and vertical separators in side-mounted applications, for instance.



For use with many cables of differing diameters. E-Chains* and E-Tubes can be subdivided both vertically and horizontally. The shelves can be arranged elevator-shifted with different bottoms

Option 2: Shelves

● **Side plates 502, middle plates 503 and shelves 420.X** form the basic pattern of a shelf system. Shelves of various widths can be arranged at 11 different heights (in 7 mm increments).

● **Locking vertical separator 510** combined with shelves. Triple slots (only for E-Chains*).

● **Locking separator 507 slotted** - with increased retention force for applications exposed to very high humidity or extreme loads. The extra retention force is achieved by asymmetric claws for the crossbar. Ensure proper alignment.

● **Slotted separators 505** are used for very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.

● The unilateral **open slotted separator 509** can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate for E-Chains*/E-Tubes	
unassembled	502
assembled	512

Middle plate for E-Chains*/E-Tubes	
unassembled	503
assembled	513

Locking vertical separator for E-Chains*	
unassembled	510
assembled	520

Locking separator for E-Chains*	
unassembled	507
assembled	517

Slotted separator for E-Chains*/E-Tubes	
unassembled	505
assembled	515

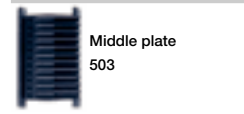
Open slotted separator for E-Chains*/E-Tubes	
unassembled	509
assembled	519

Width X [mm]	Part No. unassembled	Part No. assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28
033	420.33	421.33
043	420.43	421.43
050	420.50	421.50
062	420.62	421.62

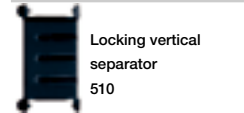
Width X [mm]	Part No. unassembled	Part No. assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200



Side plate 502



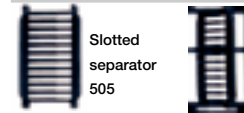
Middle plate 503



Locking vertical separator 510



Locking separator slotted 507



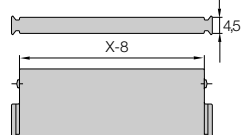
Slotted separator 505



Open slotted separator 509



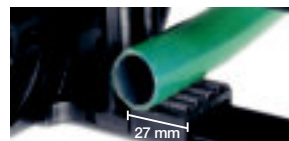
Shelf 420.X



Additional elements for interior separation

Rollclip	
unassembled	489.27
assembled	490.27

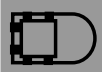
Rollclip - minimizes abrasion of particularly sensitive hoses. The Rollclip is simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the chain and hose.



27 mm

System E4/4
Inner height: 80 mm

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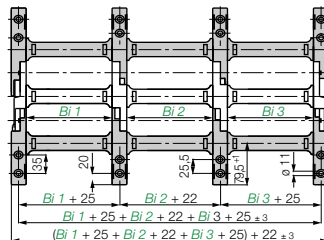
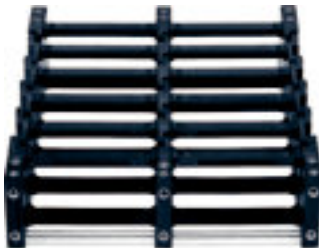


▶ page 7.223



Extension links - for extremely wide E-Chains® up to 3,0 m

- For applications in which particularly high fill weights necessitate extremely wide E-Chains® (up to 3000 mm)
- The extension link design allows virtually limitless side-by-side attachment of chains
- The unsupported length of a chain can be increased when additional loads are required
- Extension links can be used with E-Chains®, E-Tubes or as a combination of both
- They are suitable for unsupported and gliding applications in a guide trough
- E-Chains® with extension links are attached with KMA or steel mounting brackets

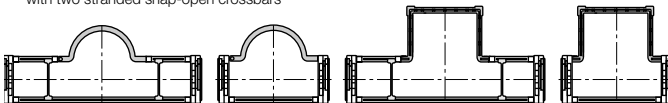


Part No. structure
5050.10 /20 /10. 200.0
5050.Bi1/Bi2/Bi3. R.0



Extender crossbars - careful guide of hoses applications

- Suitable for hoses with a maximum outer diameter of 270 mm
- Gliding operation with crossbars assembled along the outer radius and a special guide trough
- Gliding operation not guaranteed with crossbars assembled along the inner radius
- The extender crossbar can either be attached to the side links directly or can be used in combination with two stranded snap-open crossbars



Consult igus® for your extender crossbar applications. We are happy to assist you with your design layout

Round extender crossbar with snap-open crossbars Attached directly to the side link Square extender crossbar with snap-open crossbars Attached directly to the side link

Part No.	Max Ø [mm] hose	Form	Installation side link	Combination with snap-open crossb.
450.15.RHD115	115	○	-	+
450.17.RD115	115	○	+	-
450.25.D150	150	□	+	-
450.30.D200	200	□	+	-
450.35.D250	220	□	+	-
450.40.D300	270	□	+	-
450.20.HD150	150	□	-	+
450.25.HD200	200	□	-	+
450.30.HD250	220	□	-	+

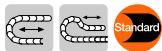
○ = round □ = square + = yes / - = no

E4 clip-on cable binder

- For side-mounted applications ● Serves as a clip-on, lateral guide for hoses and cables on E-Chains®
- The loops can be adjusted as required ● Compatible with many E4 E-Chains® ● Stylish and economical
- One clip and one locking band are needed for each chain link ● Call us if you have any questions on project planning



Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm

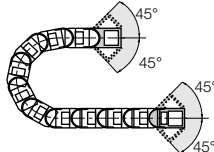


The Standard - Option KMA* - pivoting

- Recommended for unsupported and gliding applications
- Confined installation conditions
- Option - integrated C-profile strain relief device with Chainfix clip or strain relief tiwrap plates
- Corrosion resistant
- Universal mountable with attachment capability on all sides

*KMA = Polymer Metal Mounting Bracket

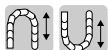
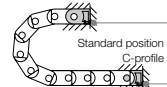
Moving end
50500/98500...1



Fixed end
50500/98500...2



The attachment variants arising automatically by the choice of the KMA mounting bracket



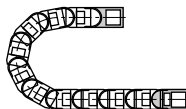
Option KMA - locking

- Recommended for vertical hanging / standing applications

Additionally:

- Universal mountable
- C-profile option
- Corrosion resistant
- Locked connections
- At very high acceleration

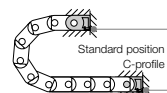
Moving end
51500/99500...1



Fixed end
51500/99500...2

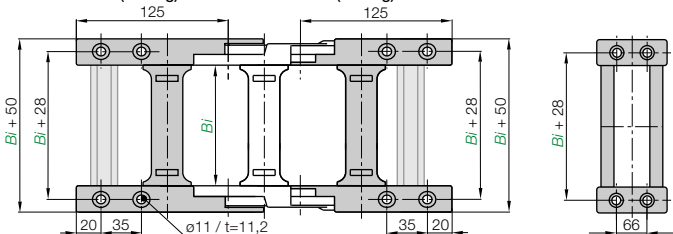


The attachment variants arising automatically by the choice of the KMA mounting bracket



Fixed end
50500/98500...2 (pivoting)
51500/99500...2 (locking)

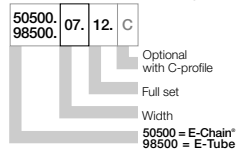
Moving end
(pivoting) 50500/98500...1
(locking) 51500/99500...1



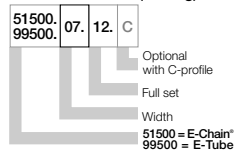
Width index	Part No. full set			C-profile option [mm]	Bi	Width index	Part No. full set			C-profile option [mm]	Bi
	pivoting	locking	locking				pivoting	locking	locking		
.05.	50500	51500	51500	.05.12	50	.31.	50500	51500	.31.12	312	
.06.	50500	51500	51500	.06.12	65	.32.	50500	51500	.32.12	325	
.07.	50500/98500	51500/99500	51500/99500	.07.12	75	.33.	50500	51500	.33.12	337	
.08.	50500	51500	51500	.08.12	87	.35.	50500/98500	51500/99500	.35.12	350	
.10.	50500/98500	51500/99500	51500/99500	.10.12	100	.36.	50500	51500	.36.12	362	
.11.	50500	51500	51500	.11.12	112	.37.	50500	51500	.37.12	375	
.12.	50500/98500	51500/99500	51500/99500	.12.12	125	.38.	50500	51500	.38.12	387	
.13.	50500	51500	51500	.13.12	137	.40.	50500/98500	51500/99500	.40.12	400	
.15.	50500/98500	51500/99500	51500/99500	.15.12	150	.41.	50500	51500	.41.12	412	
.16.	50500	51500	51500	.16.12	162	.42.	50500	51500	.42.12	425	
.17.	50500	51500	51500	.17.12	175	.43.	50500	51500	.43.12	437	
.18.	50500	51500	51500	.18.12	187	.45.	50500	51500	.45.12	450	
.20.	50500/98500	51500/99500	51500/99500	.20.12	200	.46.	50500/98500	51500/99500	.46.12	462	
.21.	50500	51500	51500	.21.12	212	.47.	50500	51500	.47.12	475	
.22.	50500	51500	51500	.22.12	225	.48.	50500	51500	.48.12	487	
.23.	50500	51500	51500	.23.12	237	.50.	50500	51500	.50.12	500	
.25.	50500/98500	51500/99500	51500/99500	.25.12	250	.51.	50500	51500	.51.12	512	
.26.	50500	51500	51500	.26.12	262	.52.	50500	51500	.52.12	525	
.27.	50500	51500	51500	.27.12	275	.53.	50500	51500	.53.12	537	
.28.	50500	51500	51500	.28.12	287	.55.	50500	51500	.55.12	550	
.30.	50500/98500	51500/99500	51500/99500	.30.12	300	.60.	50500	51500	.60.12	600	

Dimensions and order configurations

Part No. structure (pivoting)



Part No. structure (locking)



Full set, for both ends:

50500.[07].[12]

Single-part order:

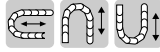
50500.[07].[1]

Mounting bracket moving end

50500.[07].[2]

Mounting bracket fixed end

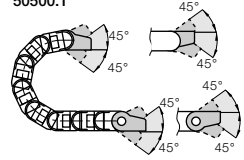




Option steel - pivoting

- For pivoting connections
- One part (two-piece) for all chain widths
- Electrically conductive

Moving end
50500.1



Fixed end
50500.2

Possible installation conditions -

Further installation angles ► installation sketch

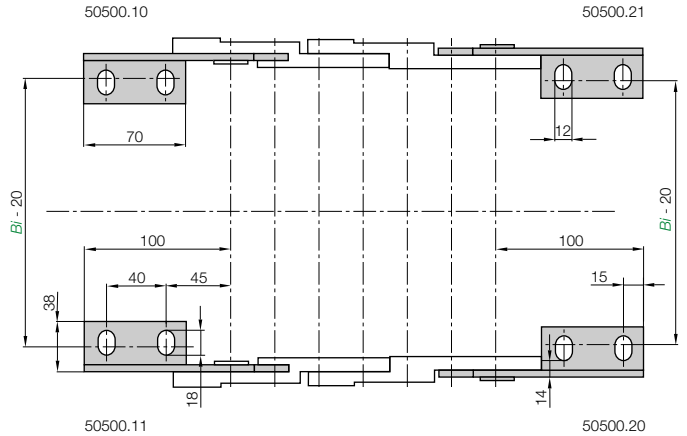
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Moving end
50500.1

Fixed end
50500.2



For E-Chain*	Part No. full set	Bi [mm]	For E-Chain*	Part No. full set	Bi [mm]
5050-5150.05	50500.12	50	5050-5150.31	50500.12	312
5050-5150.06	50500.12	65	5050-5150.32	50500.12	325
5050-5150-9850.07	50500.12	75	5050-5150.33	50500.12	337
5050-5150.08	50500.12	87	5050-5150-9850.35	50500.12	350
5050-5150-9850.10	50500.12	100	5050-5150.36	50500.12	362
5050-5150.11	50500.12	112	5050-5150.37	50500.12	375
5050-5150-9850.12	50500.12	125	5050-5150.38	50500.12	387
5050-5150.13	50500.12	137	5050-5150-9850.40	50500.12	400
5050-5150-9850.15	50500.12	150	5050-5150.41	50500.12	412
5050-5150.16	50500.12	162	5050-5150.42	50500.12	425
5050-5150.17	50500.12	175	5050-5150.43	50500.12	437
5050-5150.18	50500.12	187	5050-5150.45	50500.12	450
5050-5150-9850.20	50500.12	200	5050-5150-9850.46	50500.12	462
5050-5150.21	50500.12	212	5050-5150.47	50500.12	475
5050-5150.22	50500.12	225	5050-5150.48	50500.12	487
5050-5150.23	50500.12	237	5050-5150.50	50500.12	500
5050-5150-9850.25	50500.12	250	5050-5150.51	50500.12	512
5050-5150.26	50500.12	262	5050-5150.52	50500.12	525
5050-5150.27	50500.12	275	5050-5150.53	50500.12	537
5050-5150.28	50500.12	287	5050-5150.55	50500.12	550
5050-5150-9850.30	50500.12	300	5050-5150.60	50500.12	600

50500.12 Full set, 4 parts

2 with pin / 2 with bore

Single-part order:

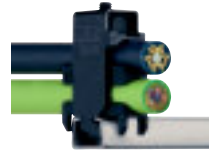
50500.1 Mounting bracket moving end, 1 part left / right

50500.2 Mounting bracket

fixed end, 1 part left / right

Chainfix clamps for the C-profile

Part No. single clamps		Part No. double clamps		Part No. triple clamps		Cable
steel	stainless steel	steel	stainless steel	steel	stainless steel	ø [mm]
CFX12.1	CFX12.1.E	CFX12.2	CFX12.2.E	CFX12.3	-	06 - 12
CFX14.1	CFX14.1.E	CFX14.2	CFX14.2.E	CFX14.3	-	12 - 14
CFX16.1	CFX16.1.E	CFX16.2	CFX16.2.E	CFX16.3	-	14 - 16
CFX18.1	CFX18.1.E	CFX18.2	CFX18.2.E	CFX18.3	-	16 - 18
CFX20.1	CFX20.1.E	CFX20.2	CFX20.2.E	CFX20.3	-	18 - 20
CFX22.1	CFX22.1.E	CFX22.2	CFX22.2.E	CFX22.3	-	20 - 22
CFX26.1	CFX26.1.E	CFX26.2	CFX26.2.E	-	-	22 - 26
CFX30.1	CFX30.1.E	CFX30.2	CFX30.2.E	-	-	26 - 30
CFX34.1	CFX34.1.E	CFX34.2	CFX34.2.E	-	-	30 - 34
CFX38.1	CFX38.1.E	-	-	-	-	34 - 38
CFX42.1	CFX42.1.E	-	-	-	-	38 - 42



igus® Chainfix steel clamps and Chainfix stainless-steel clamps - max. pull forces, adjustable with hexagon socket. Available as single, double or triple clamps.

Details ► chapter 10

System E4/4
Inner height: 80 mm

Cable ø [mm]	Part No. clamp	Part No. bottom part
04 - 08	CFC-08-M	CFC-08-C
08 - 12	CFC-12-M	CFC-12-C
12 - 16	CFC-16-M	CFC-16-C
16 - 20	CFC-20-M	CFC-20-C
20 - 24	CFC-24-M	CFC-24-C

Chainfix Clip - Modular snap-on strain relief device for C-profile

Available for all igus® E-ChainSystems® with C-profiles and also suitable for assembly in the KMA mounting brackets and clip-on strain relief for crossbars. High pull forces, plug-in modular snap-on strain relief device. Details ► chapter 10



Part No.	ø max. conduit [mm]	Width [mm]
CFN.20	20	10,8
CFN.30.52	30	16,8
CFN.20.N35	20	20,0

Chainfix Nugget for the C-Profile

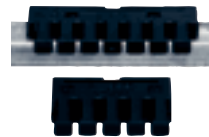
Strain relief for the fixation of cables up to a diameter of Ø 30 mm. Easy to assemble, without any screws and tools. Easy strain relief due to fixation with pre-hressed cable strap, very small space requirement. Details ► chapter 10



Part No.	Width of strain relief [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

Chainfix tiwrap plates with clip-on connection for the C-profile

Can be plugged into the KMA C-profile. Easy to assemble without any screws. Easily solvable with screwdriver nevertheless safe stop. For all E-Chains® with KMA and integrated C-profile. Details ► chapter 10

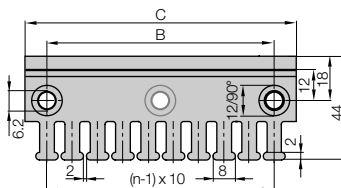


Tiewrap plate	No. of teeth n	Dim. C [mm]	Dim. B [mm]	Center bore
3050.ZB	5	50	30	-
3075.ZB	7	75	55	-
3100.ZB	10	100	80	-
3115.ZB	11	115	95	-
3125.ZB	12	125	105	-
3150.ZB	15	150	130	-
3175.ZB	17	175	155	-
3200.ZB	20	200	180	+
3225.ZB	22	225	205	+
3250.ZB	25	250	230	+

(- = no / + = yes)

Tiewrap plate as individual part

As individual component screwed on KMA. Can be plugged in the mounting brackets. Details ► chapter 10

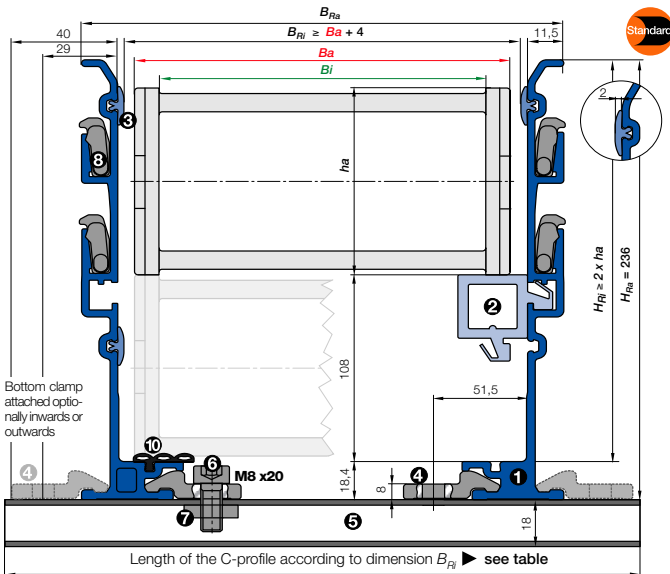


Single tiewrap plate

Shown assembled



- B_a = Outer width E-Chains* / E-Tube
- B_i = Inner width E-Chains* / E-Tube
- h_a = Outer height E-Chains* / E-Tube
- H_{Ri} = Inner trough height
- H_{Ra} = Outer trough height
- B_{Ri} = Inner trough width ▶ depends on dim. B_a
- B_{Ra} = Outer trough width
- n_{Mon} = Number of installation sets (left/right)
- n_{Ri} = Number of troughs sets (left/right)
- $H_{Ri} \geq 2 \cdot h_a$
- $B_{Ri} \geq B_a + 4$
- = Guide trough set ● = Glide bar
- = Installation set "Basic" ● = C-profile



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Installation set "Basic" with C-profile

Bottom Clamp attached optionally inwards or outwards

5050.30.300.0 ▶ Order example

B_{Ri} [mm]	Part No. attached	
	inwards	outwards
.06	104	-
.06	119	-
.07	129	-
.08	141	960.50.200
.10	154	960.50.225
.11	167	960.50.225
.12	179	960.50.250
.13	192	960.50.250
.15	204	960.50.275
.16	217	960.50.275
.17	229	960.50.300
.18	242	960.50.300
.20	254	960.50.325
.21	267	960.50.325
.22	279	960.50.350
.23	292	960.50.350
.25	304	960.50.375
.26	317	960.50.375
.27	329	960.50.400
.28	342	960.50.400
.30	354	960.50.425
.31	367	960.50.425
.32	379	960.50.450
.33	392	960.50.450
.35	404	960.50.475
.36	417	960.50.475
.37	429	960.50.500
.38	442	960.50.500
.40	454	960.50.525
.41	467	960.50.525
.42	479	960.50.550
.43	492	960.50.550
.45	504	960.50.575
.46	517	960.50.575
.47	529	960.50.600
.48	542	960.50.600
.50	554	960.50.625
.51	567	960.50.625
.52	579	960.50.650
.53	592	960.50.650
.55	604	960.50.675
.60	654	960.50.725

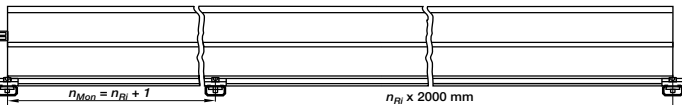


- Components, trough "Basic": ① Trough side parts, aluminum, 2 m ② Glide bar, plastic, 2 m ③ Glide strips, plastic, 2 m (without glide strips on request) ⑩ Optional: Silencer profile, rubber
- Components, installation set "Basic": ④ Bottom clamp, aluminum ⑤ C-profile, steel galvanized ⑥ Screw M8 x20 ⑦ Sliding nut M8 ⑧ Interface connector, plastic



Order example: Length of travel 30 m - Center mounted for Series 5050.30.300.0 with $B_{Ri} = 345$

- Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. 975.30.SL
- Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. 975.31.SL
- Installation set "Basic" complete (guide-sets + 1)
Order text: 17 installation sets "Basic" Part No. 960.50.425
- Module for the fixed end
Order text: 1 set Part No. 975.80
- Option: For an additional noise dampening with silencer profile, please add Index A - Example: Part No. 975.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1



A quick fix for mounting the stationary end of an E-Chain*
With this module for the fixed end, fast and easy mounting onto the Aluminum "SuperTrough" is now possible without any drilling. Fast mounting of the E-Chain* by clamping onto the aluminum trough
● Quick relocation of the stationary end ● No drilling necessary ▶ page 9.16

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